Nez Perce National Forest

ROADS ANALYSIS REPORT

Memorandum

To: Whom it may concern

CC:

From: Joe Bonn

Date: 3/9/2006

Re: Forest Scale Roads Analysis- final

Attached is the final Forest Scale Roads Analysis report for the Nez Perce National Forest.

Public notification of the preliminary roads analysis report was made. Comments received on the preliminary report were received and have been included in the final report in appendix D.

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Nez Perce National Forest

Roads Analysis Report

Executive Summary

Introduction

On March 3, 2000, the Forest Service proposed to revise Code of Federal Regulations 36 CFR Part 212 to shift emphasis from transportation development to managing administrative and public access within the capability of the lands. The proposal was to shift the focus of National Forest System road management from development and construction of new roads to maintaining and restoring needed roads and decommissioning unneeded roads within the context of maintaining, managing, and restoring healthy ecosystems.

On January 12, 2001, the Forest Service issued the final National Forest System Road Management Rule. This rule revises regulations concerning the management, use, and maintenance of the National Forest Transportation System. Consistent with changes in public demands and use of National Forest System resources and the need to better manage funds available for road construction, reconstruction, maintenance, and decommissioning, the final rule removes the emphasis on transportation development and adds a requirement for science-based transportation analysis. The final rule is intended to help ensure that additions to the National Forest System road network are those deemed essential for resource management and use; that construction, reconstruction, and maintenance of roads minimize adverse environmental impacts; and that unneeded roads are decommissioned and restoration of ecological processes are initiated.

This roads analysis process does not make final decisions concerning site-specific projects or the allocation of money for road management. It does not identify where new roads will be built or roads that will be decommissioned. It is not subject to the procedures and appeal processes required by the National Environmental Policy Act (NEPA).

Process

Roads analysis is a six-step process. The steps are designed to be sequential with the understanding the process may require feedback and iteration among steps over time as new information becomes available. The six steps are:

Step 1. Setting up the analysis
Step 2. Describing the situation
Step 3. Identifying the issues
Step 4. Assessing benefits, problems and risks
Step 5. Describing opportunities and setting priorities
Step 6. Reporting (Key Findings)

The results of this analysis is a report for decision-makers and the public that documents the information and analyses used to identify opportunities and provide information that will assist with setting priorities for future management of the Nez Perce National Forest road system.

Key Findings

- **Road maintenance funding is not adequate to maintain and sign roads to standard.**

  This roads analysis clearly shows that annual appropriated maintenance funding is inadequate to maintain the current road system on the Forest. Many roads will continue to build up additional deferred maintenance costs and degrade unless increases in road management funding become available.

- **Road access may not be adequate for future management needs.**

  The arterial and collector road system outside of inventoried roadless areas is nearly complete to adequately manage vegetation resources. Depending on management allocations from the revision of the Forest Plan, future strategies may require road access for management activities.

  Some arterial, collector and local roads are not being maintained to specified standards. In some areas the road system will continue to degrade and this will affect future access to areas served by these roads.

- **Management of the Forest road system can affect cultural and traditional uses (such as plant gathering, access to traditional & cultural sites) and American Indian treaty rights**.

  Maintaining access for traditional and cultural uses by American Indians is a very important function of the Forest road system. The entirety of the Nez Perce National Forest is ceded territory of the Nez Perce Tribe, who retains strong traditional cultural ties to these lands. This tribe also retains rights to hunt, gather, and fish at usual and accustomed places on these ceded lands through the Treaty of 1855.

  The Nez Perce Tribe tribe has several locations that are significant for traditional gathering, fishing, hunting, and religious purposes. Several locations on the Forest are held to be sacred by members of the Nez Perce Tribe. Tribal members are active users of these traditional areas.

- **Some roads are causing adverse impacts and should be evaluated for mitigation projects at the sub-forest level.**

  Sub-forest watershed analysis will include an analysis of the road systems. Potential projects to address adverse impacts from existing roads will be identified.

- **Existing roads provide public access and may be needed for future management activities not currently planned.**

  The potential to increase opportunities for roaded and unroaded recreation is dependent on funding, public input and agency policy. Trends in budgets for timber dollars to construct and maintain roads have decreased and funding for road construction may have to come from another source, such as recreation.

  The current road system provides access for planned fuel management activities on many parts of the Nez Perce NF. The road system plays an integral role in providing defensible boundaries and in some cases will act as fire control lines for the units that are situated along Forest roads. In other areas where treatment units are not situated next to, or in close proximity to roads, the road system will act as a staging area for helicopter operations to provide access to those treatment units.

  In many areas of the Nez Perce National Forest, the suitable timber base has arterial or collector roads to access the general area. Local roads are then needed to provide access to the immediate area needing silvicultural or other treatment. Additional local roads in the roaded or inventoried roadless areas may be needed to facilitate vegetation and prescribed fire management activities.

Introduction

Background

In August 1999, the Washington Office of the USDA Forest Service published Miscellaneous Report FS-643 *Roads Analysis: Informing Decisions about Managing the National Forest Transportation Syste*m. The objective of roads analysis is to provide decision-makers with critical information to develop road systems that are safe and responsive to public needs and desires, are affordable and efficiently managed, have minimal negative ecological effects on the land, and are in balance with available funding for needed management actions.

In October 1999, the agency published Interim Directive 7710-99-1 authorizing units to use, as appropriate, the road analysis procedure embodied in FS-643 to assist land managers making major road management decisions.

On March 3, 2000, the Forest Service proposed to revise 36 CFR Part 212 to shift emphasis from transportation development to managing administrative and public access within the capability of the lands. The proposal was to shift the focus of National Forest System road management from development and construction of new roads to maintaining and restoring needed roads and decommissioning unneeded roads within the context of restoring healthy ecosystems.

On January 12, 2001, the Forest Service issued the final National Forest System Road Management Rule. This rule revises regulations concerning the management, use, and maintenance of the National Forest Transportation System. Consistent with changes in public demands and use of National Forest System resources and the need to better manage funds available for road construction, reconstruction, maintenance, and decommissioning, the final rule removes the emphasis on transportation development and adds a requirement for science-based transportation analysis. The final rule is intended to help ensure that additions to the National Forest System road network are those deemed essential for resource management and use; that construction, reconstruction, and maintenance of roads minimize adverse environmental impacts; and that unneeded roads are decommissioned and restoration of ecological processes are initiated.

This process is not a decision making analysis that would authorize any road closures or on-the-ground projects. It is an assessment using current information intended to assist with future project decisions at the Forest, watershed, and project-level scale. It is not subject to the procedures and regulations required under the National Environmental Policy Act (NEPA).

The Northern Region of the Forest Service held a training session about the January 2001 Rule in Missoula, Montana on March 20, 2001 to provide guidance to Forests on completing roads analysis.

The Forest Service Manual 7712.15 provides for extensions to the January 13, 2003 deadline for all Forest Service units to have Forest-Scale Roads Analysis complete. The Nez Perce National Forest Supervisor requested and received an extension from the Regional Forester in order to integrate the roads analysis with the Revision of the Forest Plan.

Process

Roads analysis is a six-step process. The steps are designed to be sequential with the understanding the process may require feedback and iteration among steps over time as new information becomes available. The amount of time and effort spent on each step differs by project based on specific situations and available information. The process provides a set of possible issues and analysis questions for which the answers can help managers make choices about road system management. Decision-makers and the analysis team determine the relevance of each question, incorporating public participation as deemed necessary. The following six steps from Report FS-643 guided the process:

Step 1. Setting up the analysis
Step 2. Describing the situation
Step 3. Identifying the issues
Step 4. Assessing benefits, problems and risks
Step 5. Describing opportunities and setting priorities
Step 6. Reporting (Key Findings)

- Products

The product of this analysis is a report for decision-makers and the public that documents the information and analyses used to identify opportunities and set priorities for future national forest road systems. Included in this report is a map displaying the known road system for the analysis area, and the risks and opportunities for the road or road segment analyzed in detail. The report includes other maps and tables necessary to display summaries of analysis and key findings.

- Report Organization

This report documents the information and analysis procedure used for the roads analysis. The report contains a table rating each road for recreation use value, access value, resource management value, and aquatic risk, mass wasting risk, surface erosion risk, and wildlife risk. It contains management guidelines and opportunities for future actions that will impact the Forest roads system.

Objectives of the Analysis

- Establish the level and type of decision-making the analysis will inform

    - The roads analysis project will be used to support the revision of the Nez Perce National Forest Plan and subsequent sub-forest scale (the term "*sub-forest*" refers to analysis area scales usually at the 5th and 6th code watershed, 10 to 200 thousand acres, or site-specific project level scale). It is intended to identify prioritized opportunities, which address watershed health or road management. It will assist in developing Forest wide standards and guidelines and geographic area direction for the Forest Plan Revision effort.

- Identify Scale/Analysis Area

    - The analysis area consists of the Nez Perce National Forest (2.2 million acres) in Idaho in Region 1 of the National Forest System.

    - Concentrate on classified arterial (primary), collector (secondary) and important local roads. The Forest-scale project will not analyze unclassified roads (temporary roads or travel-ways resulting from off-road vehicle use).

    - Use only existing information.

- Interdisciplinary Team Members (IDT) and Participants

    Joe Bonn – IDT Leader/Writer, Assistant Forest Engineer
    Nick Gerhardt – Hydrology, Forest Hydrologist
    Dave Green – GIS Mapping, Forest GIS Coordinator
    Laura Smith – Public Involvement,
    Steve Blair – Wildlife, Forest Biologist
    Scott Russell – Fisheries, Forest Fisheries Biologist
    Laurie Doman - Recreation
    Tim McDonald – GIS Mapping
    Fred Bower– Transportation systems

Analysis Plan

The detailed analysis process, following the direction of the Forest Leadership team, considered 1,050 miles of arterial, collector and important local classified roads in the

Forest roads database. This was a two-step, integrated approach that considered issues, data, and information and systematically addressed this information. Figure 1 is a map showing the arterial, collector, and important local roads analyzed in detail. Also, the remaining 2,823 miles of local roads are shown in Figure 1. The 2,823 miles of local roads are not analyzed in detail. However, they are included in the analysis of watershed condition and erosion hazards created by the Forest road system.

Step 1 considered the following:

- Road maintenance costs
- Recreation use value
- Access value
- Resource management value
- Mass Wasting Risk
- Surface Erosion Risk
- Aquatic Risk
- Wildlife Risk

The interdisciplinary team (IDT) assigned a low, medium, or high value rating to each value and risk factor. All value and risk factors were considered equal. For example, a Low aquatic risk value of one equals a Low wildlife risk of one, and so on. IDT members conducted resource-specific analyses to derive the data that appears in the Road Matrix (e.g., aquatic risk, recreation use value) and the information used to answer the questions in Chapter 4 – Assessing Benefits, Problems, and Risks. A complete listing for each value and risk criteria for the 1,050 miles of road is provided in the Road Matrix, Appendix C.

In Step 2, the numerical ratings for each risk or value factor for each road segment were summed to create a set of descriptive coordinates that indicated their value and risk. The descriptive coordinates for all road segments were plotted on a graph with four quadrants representing the following categories:

- Category 1 – Higher Value, Lower Risk
- Category 2 – Higher Value, Higher Risk
- Category 3 – Lower Value, Higher Risk
- Category 4 – Lower Value, Lower Risk

The results of this exercise are shown in Figure 2 located in Chapter 5. Once the roads were assigned into one of the four management categories, recommendations for future actions could be described. Past experience in project analysis, use of existing data, queries to the roads and GIS database and recent decisions to prioritize watersheds for analysis were used by the IDT to describe opportunities and set priorities. The remaining 2,823 miles of local roads will be analyzed during watershed analysis.

The IDT discussed the use of threatened, endangered, and sensitive (TES) wildlife species to determine road risks to wildlife. The listed TES terrestrial species for the Nez

Perce NF (wolf, lynx, grizzly bear, bald eagle,) are not at any meaningful risk from roads and the risk value was one for all road segments. In order to have a criteria that provided a relative difference between road segments, the IDT agreed to use elk. Research and past analysis have shown roads have impacts to elk on the Nez Perce NF.

A complete discussion of the criteria used by each IDT specialist to define the High, Medium, and Low for each risk and value indicator is located in Appendix A.

Information Needs

The IDT identified the following information sources to use for the analysis:

- INFRA data base of road travel routes.
- Potential Public Forest Service Road (PFSR) project submittals.
- Management Area prescriptions and Suitable Timber Base for the 1987 Nez Perce Forest Plan.
- 1987 Roadless area inventory for the Nez Perce Forest Plan Revision.
- Streams and riparian areas.

The IDT also identified the following GIS base map needs:

- Classified Roads.
- 6th -level watersheds.
- Land-type maps from 1987 Forest Plan.
- Land status.

Public Involvement

- **Communications Plan**

A communication plan was developed to inform and involve the public and key stakeholders. The tone of this communication effort was low-key, informative, aimed at stakeholders with a direct and meaningful interest in National Forest road system management. This was appropriate for two main reasons. First, this is not a NEPA analysis, but a supporting assessment. It was felt that public scoping could be accomplished in conjunction with the Forest Plan Revision process. Second, numerous public scoping efforts related to road and travel management have preceded this analysis. A local base of knowledge about public issues exists on the Forest.

The Communications Plan for this assessment identified Idaho County and the Nez Perce Tribe as the key contacts for public involvement. The ID team felt that the commissioners and the Tribe had road management knowledge and information that could be useful in identifying mutual opportunities and issues.

- **Public Contacts**

Copies of the preliminary report were sent to the following organizations in 2005 for comment:

- Idaho County Commissioners
- Nez Perce Tribe
- Lee Zukoski, Pacific Rivers Council
- Jeff Cook, Idaho Department of Parks and Recreation
- Larry McLaud, Friends of the Clearwater

Also, all organizations and individuals on the NEPA Quarterly mailing list received notice of the availability of the preliminary report. A notice of availability was also published in the Idaho County Free Press.

The Analysis Area

The Nez Perce National Forest contains approximately 2.2 million acres in north central Idaho and includes lands in the South and Middle Forks of the Clearwater River, the Snake River, Salmon River and the Selway River drainages. These rivers are part of the Snake and Columbia River System. About 508, 550 acres of the 2.2 million is Inventoried Roadless Areas with an additional 936,000 acres in designated wilderness (Land Areas of the National Forest System, 2003). The remaining 755,000 acres have been developed with varying levels of roads.

Subbasin assessments have been completed for the Nez Perce National Forest. Rather than redevelop resource information these subbasin assessments have been utilized in the development of the Forest Scale Roads analysis. The Subbasin assessments include:

- Middle Salmon
- South Fork of the Clearwater
- Middle Fork Clearwater/Selway

Landforms vary across the Forest from dry canyonlands in the Salmon River to moist canyons and breaklands in the Clearwater and lower Selway rivers to rolling uplands near the head of the Southfork Clearwater River and other stream systems to mountain uplands and subalpine environs in the highest portions.

Soils and landtypes on the Forest are strongly influenced by the Idaho batholith and an overlying volcanic ash cap. The ash cap provides important functions related to soil moisture retention, nutrient processes and growing potential while many of the underlying soils derived from the batholith are susceptible to erosion processes if exposed.

All areas on the Forest are within the range of anadromy for aquatic species and several of these species and habitat are managed under the requirements of the endangered species act.

Hydrology is dominated by snowmelt processes and disturbance regimes are strongly controlled by fire.

Much of the Forest land base exists in large contiguous blocks with only modest amounts of inholdings, consequently much of the Forest road system serves primarily National Forest purposes. National Forest roads systems are served by State, County and Highway District roads systems. A number of primary access routes to the National Forest exist as stream grade routes as result of the river canyon topography.

Identifying Issues

Preliminary issues were identified in the project initiation letter. Preliminary issues were reviewed and supplemented based upon ID Team member knowledge from past project analysis and past project public scoping. Only issues related to the Forest scale appropriate to the needs of road analysis were used in this analysis. Sub-forest scale issues will be recommended for addressing at a scale below the Forest level during watershed analysis or project analysis.

- **Forest Scale Issues**

    1. Costs associated with management of the existing road network. Road maintenance funding is not adequate to maintain and sign roads to standard.

        - Congressionally appropriated road maintenance funding is approximately 9 % of what is needed for the current classified road system.

        - With limited funding the Nez Perce National Forest needs to focus on high priority areas for: a) road maintenance and b) conducting sub-forest scale roads analysis to identify unneeded roads and maintenance opportunities

    2. Road access may not be adequate for future management needs.

        - The arterial and collector road system on the Forest was developed over several decades to access different portions of the Forest to manage different resources and provide for a variety of public uses. This roads analysis will provide supporting documentation for future transportation planning to be completed during sub-forest and project level roads analysis.

    3. Management of the Forest road system can affect cultural and traditional uses (such as plant gathering, access to traditional & cultural sites) and American Indian treaty rights.

    4. Risks of the existing transportation system on aquatic and terrestrial resources. Some roads are causing adverse impacts, such as sedimentation in streams, wildlife impacts, and reduced access due to landslides, and should be evaluated for mitigation projects at the sub-forest level.

5. Existing roads provide public access and may be needed for future activities not currently planned.

    - Forest roads are an important part of people's desires for the National Forest. People rely on them to drive to their job and to recreate on the Forest. Decisions that will change the existing system will occur through public involvement and project specific analysis that considers effects on any roads in the system now and any proposed for addition or deletion from the system in the future.

Introduction - Current Road System Benefits, Problems and Risks

In this step publication FS-643 asks a series of questions intended to focus the roads analysis on benefits, problems and risks associated with the Forest road system. The ID Team developed answers to the questions in Chapter 4 at the Forest scale to provide a Forest-wide perspective and viewpoint. This approach will provide context and a reference source for sub-forest scale roads analysis.

Ecosystem Functions and Processes

EF 1: What ecological attributes, particularly those unique to the region, would be affected by roading of currently unroaded areas?

There are approximately 508,550 acres in inventoried roadless areas across the Forest. These areas range from relatively dry, Forest types at low elevations to high elevation sites with subalpine Forests. Many of the unroaded portions of the Forest are mid to high elevational locations fairly characteristic of the region. However, research natural areas (RNAs) have been designated across the Forest due to their unique vegetation communities and features. Coastal disjunct plant communities, characteristic of areas west of the Cascades, are found in several of the unroaded areas. Roading in, or near, these unique areas could reduce the ecological diversity by providing avenues for noxious weeds invasion, thereby replacing native plant communities.

Many streams within unroaded watersheds provide habitat for steelhead, chinook salmon, bull trout, and west slope cutthroat trout. Sediment delivery from road construction, maintenance, and potential road failures could impacts populations and habitat of these species.

EF 2: To what degree do the presence, type, and location of roads increase the introduction and spread of exotic plant and animal species, insects, diseases, and parasites? What are the potential effects of such introductions to plant and animal species and ecosystem functions in the area?

Roads are one of the primary facilities on the Forest that facilitate the introduction and spread of exotic species, particularly, noxious weeds.

The spread of weeds can primarily be attributed to human activities associated with vehicles, roads, trails and rivers. The potential affects to plant and animal species include altering ecosystem processes. Weed species of concern include spotted knapweed, meadow hawkweed, orange hawkweed, and yellow star thistle.

EF 3: To what degree do the presence, type, and location of roads contribute to the

control of insects, diseases, and parasites?

In general, the presence of roads can facilitate the control of insects, diseases, and parasites across the Forest. Little direct control of these pests is typically conducted on the Forest, rather indirect measures, such as altering stand conditions through silvicultural activities is usually done. Roads provide access that is needed to manage stands

Roads facilitate management actions to be undertaken to address these concerns. Silvicultural treatment of affected or susceptible tree stands can reduce or suppress insects and disease occurrences. An important indication of Forest health is the diversity and distribution of age classes and corresponding species composition. The greater the diversity and distribution of stand ages and species, the more resistant the entire Forest is to damage from any single insect agent.

To assess the condition of Forest stands, ongoing monitoring must be conducted across the Forest. Roads contribute to access for the detection, prevention, and management activities associated with responding to insect, disease, and parasite attacks. Without road access, these actions would be more expensive in many cases (although aerial insect and disease surveys can be very cost-effective) and management actions can often be readily implemented from well-designed transportation system.

EF 4: How does the road system affect ecological disturbance in the area?

The road system has direct and indirect effects on ecological disturbances across the Forest although most direct effects are limited to the approximately 34 percent of the Forest containing roads. The primary large-scale disturbance process across most of the Nez Perce National Forest is fire. The fire regimes range from mixed, lethal/nonlethal burns to lethal fire disturbances at scales that have affected the entire hydrologic unit watershed. Roads provide some of the access needed to control both wildfires and prescribed control burning. Roads also have an indirect affect by acting as firebreaks limiting the severity and extent of wildfires by breaking up fuel continuity. Human-caused fires may increase due to the presence of a road system as access allows more use by people.

Other ecological disturbance factors impacted by roads on the Nez Perce National Forest are erosional processes, riparian conditions, and insect/disease activities. The impacts of roads on erosional disturbance processes are discussed in more detail in items AQ 2 and AQ 3, but generally the roads within the project area increase the risk of both surface erosion and mass wasting events. Mitigation measures such as surfacing and alternate design methods can reduce this risk.

Roads in streamside or valley bottom locations disrupt the riparian areas through constriction, removal of woody debris and shade, introduction of sediment, reduction in leafy primary production, and through increased hazard of introduction of toxic pollutants to the stream.

EF 5: What are the adverse effects of noise caused by developing, using, and maintaining roads?

This is not an issue at the Forest scale. It will be addressed, if it is an issue, at the sub-forest scale.

Aquatic, Riparian Zone and Water Quality (AQ)

The answers to the Aquatic questions result in part from analysis of the risks and benefits of 3,873 miles of classified roads on the Forest.

AQ 1: How and where does the road system modify the surface and subsurface hydrology of the area?

Roads can affect the routing of water through a watershed by intercepting, concentrating, and diverting flows from their natural flowpaths. These changes in routing can result in increases in peak flows by both a volumetric increase in quick flow and changes in the timing of storm runoff to streams.

Although roads have not been inventoried in relation to their proximity to wetland features, we can estimate where the road system modifies the surface and subsurface hydrology by measuring the road/stream proximity. Across the Forest the following table shows the breakout of roads relative to proximity to streams. Road totals include private and other system roads within the external boundary of the Forest, 3873 miles are Forest Service jurisdiction.

Table 1 - Stream Proximity

	Miles w/in 50 ft of streams	Miles w/in 50-150 ft of streams	Miles w/in 150-300 ft of streams	Miles beyond 300 ft of streams
Miles	99.98	423.7	485.66	3360.9
Percent	2.3	9.7	11.1	76.9

Approximately three quarters of the road miles are beyond three hundred feet from streams. Obviously the distribution of these miles varies widely across the Forest. Greater detail by hydrologic unit code or ecological reporting unit can be found in the subunit assessments.

AQ 2: How and where does the road system generate surface erosion?

Surface erosion occurs on most wildland roads because their surfaces, cutslopes, fillslopes and associated drainage structures are usually composed of erodible material and are exposed to rainfall and concentrated surface runoff. Surface erosion differs greatly depending on many factors, the most influential of which are usually: the erodibility of the exposed surface; the slope of the exposed surface; and the area of

exposed surface that generates and concentrates runoff. Table 2 provides display of road mileages by soil erosion rating for the Forest.

Table 2 - Soil Erosion Rating Occurrence

	Miles occurring on soils w/ low surface erosion rating	**Miles occurring on soils w/ moderate surface erosion rating**	**Miles occurring on soils w/ high surface erosion rating**
Miles	911	988	2361
Percent	21	23	54

Most of the roads on the forest, approximately 77 percent, exist on soils rated for ether moderate or high surface erosion potential. This is due to the influence of the Idaho batholith. A number of techniques and measures can be used to help mitigate this potential for causing erosion many of which have been employed on the Nez Perce Forest for several decades. Among these, surfacing of roads with competent aggregate has been demonstrated to achieve significant benefit for minimizing erosion potential. (Burroughs and King, 1989).

AQ 3: How and where does the road system affect mass wasting?

Many Forest roads, especially those on steep slopes are subject to failure through mass wasting processes. Roads can intercept subsurface water flow, redirect hillslope drainage, alter soil-loading patterns in cut and fill slopes, and can initiate debris flows at failed stream crossings. Many of these factors can be mitigated through proper roadway design and construction; however older roadways sometimes were not constructed with the full suite of appropriate techniques. Table 3 illustrates the roadway miles existing on landtype hazard ratings for mass wasting potential.

Table 3 - Road mileages on Landtype hazard ratings for mass wasting potential

	Miles existing on landtypes with low mass wasting rating	**Miles existing on landtypes with moderate mass wasting rating**	**Miles existing on landtypes with high mass wasting rating**
Miles	1527.6	2293	440
Percent	34.9	52.5	10.1

As can be seen approximately 10 percent of the miles exist on landtypes rated as high for potential for mass wasting. Generally, these are located in stream breakland areas of the Forest such as the lower Selway River and the lower portions of the South Fork Clearwater River.

AQ 4: How and where do road-stream crossings influence local stream channels and water quality?

Since roads are linear features that traverse hillslopes and streams are linear features that follow fall lines transverse to contours it logically follows that areas with either higher road densities or higher stream densities or both would be areas having greatest potential for influence of channels and water quality due to stream crossings. Generally, on the Nez Perce Forest road densities exist at levels below 3 to 5 miles of roadway per square mile (subbasin assessments). Stream densities are not quantified in the subbasin assessments but rolling upland landforms on generally low cohesion soils as derived from batholith influence exhibit highly dentritic drainage patterns. Consequently, the upper drainages of the South Clearwater River as well as more limited rolling upland features elsewhere on the Forest pose areas of greatest potential for local stream channel and water quality influence from road-stream crossings.

AQ 5: How and where does the road system create potential for pollutants, such as chemical spills, oils, de-icing salts, or herbicides, to enter surface waters?

Roads may create potential pollutants in several ways. Chemicals such as surfacing oils and fertilizers may be applied to roads for maintenance, safety, or other improvement. Roads may also become contaminated by material from vehicles, including accumulation of small spills, such as crankcase oil and hydraulic fluid or from accidental spills of hazardous or harmful materials being transported over roads. Applied or spilled materials may have access to water bodies, depending on road drainage systems and runoff patterns. The severity of damage depends on what organisms might be exposed, their susceptibility to the material, and the degree, duration, and timing of their exposure.

Traffic levels and types of traffic also influence potential for introduction of pollutants into surface waters as well as stream proximity. On the Nez Perce National Forest consideration of these factors indicates that the South Fork Clearwater River exhibits the greatest potential.

AQ 6: How and where is the road system "hydrologically connected" to the stream system? How do the connections affect water quality and quantity (such as, the delivery of sediments and chemicals, thermal increases, elevated peak flows)?

Stream proximity as spoken to in question AQ 2 is likely the most useful indicator to provide a sense of the potential for hydrologic connectivity of the road system. Quantification of water quality is, at least for sediment, is performed through project analysis using the Forest Nez Sed model in accordance with the Forest Plan.

Influence of the road system upon water quantity is generally evaluated during project analysis through methodologies of equivalent clearcut analysis, of which road extents constitute one factor.

AQ 7: What downstream beneficial uses of water exist in the area? What changes in uses and demand are expected over time? How are they affected or put at risk by road-derived pollutants?

Beneficial uses of water on the Nez Perce National Forest are found in the State of Idaho Water Quality Standards and Wastewater Treatment Requirements (IDAPA 58.01.02) and in the Forest Plan. The State Water Quality Standards list cold water communities, salmonid spawning, primary contact recreation, domestic water supply, and special resource water as beneficial uses existing in rivers and streams on the Nez Perce National Forest . The Forest Plan beneficial uses are limited to fish species and municipal watersheds. Known beneficial uses for each watershed are listed in Appendix A of the Forest Plan.

Very few roads are currently being constructed and none within 300 feet of streams, except for the occasional stream crossing, however, numerous roads are being obliterated, thus the Forest's total road mileage is decreasing each year. The Forest has also made it a priority to maintain and improve those roads that are contributing to the decline in water quality. Given these conditions, water quality on the Nez Perce National Forest is on an upward trend and beneficial uses are less impacted than in the past.

AQ8: How and where does the road system affect wetlands?

The majority of wetlands on the Nez Perce NF are associated with riparian areas adjacent to streams. Roads can restrict or divert water flow in wetlands by direct encroachment or through changes in hydrology. Both surface and subsurface flows can be altered resulting in changes in water tables affecting the wetland moisture regimes.

Areas of wide valley bottoms (two to three times the stream width) would have been floodplains, receiving annual inundations and deposition of fine sediments. These areas have historically contained wetlands. Roads and their ditchlines concentrate flows that historically were dispersed across valley bottoms and associated wetlands. Roads also may drain areas so they no longer retain water for gradual, sustained release into wetland areas throughout the growing season.

AQ 9: How does the road system alter physical channel dynamics, including isolation of floodplains; constraints on channel migration; and the movement of large wood, fine organic matter, and sediment?

Roads can alter physical channel dynamics, including isolating floodplains, constraining channel migration, and movement of large wood, fine organic matter, and sediment. This happens most at road-stream intersections and where roads are within close proximity to streams. Of the 3873 miles of National Forest system roads, approximately 23 percent exist within 300 feet of stream channels.

AQ 10: How and where does the road system restrict the migration and movement of aquatic organisms? What aquatic species are affected and to what extent?

Larger streams are generally crossed with bridge structures minimizing disruption of movement of aquatic organisms. Culverts on perennial streams however can affect movement. The Forest, in cooperation with the Nez Perce Tribe has begun a program to identify and correct passage problems. Focus is primarily upon anadromous salmonids however crossing designs consider a broader spectrum of organisms and their needs. Stream simulation designs are generally preferred where applicable. To date, most of the efforts have been directed toward watersheds exhibiting the greatest potential for the aquatic species as identified in the subbasin planning assessments.

AQ 11: How does the road system affect shading, litterfall, and riparian plant communities?

The overall road system throughout the Forest creates minor negative effects to shading, litterfall, and riparian plant communities with the majority of roads located well outside of riparian areas For the majority of roads, decreases in shading, litterfall, and impacts to riparian plant communities are only seen along short stream reaches and where roads intersect streams. The effects are not as notable due to the relatively small amount of riparian area affected.

AQ 12: How and where does the road system contribute to fishing, poaching or direct habitat loss for at-risk aquatic species?

Fishing intensity varies across the Forest dependent upon accessibility, fish stocking and regulations. Salmonid species legal to take in most drainages are westslope cutthroat trout, rainbow trout, brook trout and whitefish.

All roads increase the probability or risk of poaching fish in varying degrees. However, roads providing access along streams with late summer or fall spawning fish most likely contribute to higher poaching opportunities. Spring chinook salmon spawn in the late summer during low stream flows and are susceptible to poaching. . Steelhead trout spawn in the spring and are often gone before the snow has melted off the roads enough to allow access. This minimizes fishing or poaching pressure on adults. Fishing pressure on juvenile steelhead trout is considered low to moderate on most streams with road access.

AQ 13: How and where does the road system facilitate the introduction of non-native aquatic species?

The road system has facilitated the introduction of non-native aquatic species. Non-native brook trout have been introduced into several watersheds throughout the Forest These introductions were a combination of incidental and management related actions and the result of high mountain lake stockings. Populations appear to have remained stable in the affected drainages and have not expanded to adjacent drainages. The Idaho Department of Fish and Game's fish supplementation program indicates that only native

salmonids are stocked into the Forest's lakes and streams; westslope cutthroat trout are presently stocked in a few high mountain lakes on a three year rotation and both spring chinook salmon and steelhead trout (juveniles and adults) are released in selected rivers and streams annually.

The existing road system maintains the opportunity for individuals to release additional non-native fish species throughout the Forest. However, any introductions of non-native species (other than salmonids) from adjacent off-Forest aquatic environments and out-of state streams and lakes will most likely not result in viable populations due to the unfavorable habitat conditions within the Forest for these species (lack of lower elevation lakes and the presence of mostly high gradient, cold, sterile streams).

AQ 14: To what extent does the road system overlap with areas of exceptionally high aquatic diversity or productivity, or areas containing rare or unique aquatic species or species of interest?

Primary watersheds of note include the lower gradient drainages in the upper South Fork Clearwater River, Slate Creek and Whitebird Creek systems draining into the Salmon River system, and Clear Creek and O'Hara creeks on the Middle Fork and Selway systems respectively.

Terrestrial Wildlife

This discussion is limited to Nez Perce National Forest Plan Management Indicator Species (MIS) and Threatened, Endangered or Sensitive (TES) wildlife species. MIS species found in the analysis area include elk, white-tailed deer, moose, pileated woodpecker, belted kingfisher and pine marten. TES species known or suspected to reside in the analysis area include wolf, black-backed woodpecker, boreal toad, goshawk, fisher and wolverine.

No T&E plant species are known or expected to occur on the Forest. Sensitive plants known in or near the analysis area, which occur in riparian habitats within older Forest, include: green bug-on-a-stick; mingan moonwart; and naked mnium. Bristle-stalked sedge has been documented in wet meadow habitats in or near the Forest. Sensitive plant species occurring in drier habitats include: broad-fruit mariposa, Dasynotus, green bug-on-a-stick, Henderson's sedge, lance-leaved moonwort and light hookeria. Though ICDC records do not indicate presence, based on habitat descriptions, it is possible clustered lady's slipper, deer fern, Idaho strawberry, mingan moonwart, naked mnium, short-styled triantha, spacious monkeyflower and sweet scented coltsfoot also occurs in the Forest.

TW 1: What are the direct effects of the road system on terrestrial species habitat?

Generally, the roads open to motorized travel, represent habitat. Most MIS and TES mammals routinely travel across Forest roads open to motorized vehicles between preferred habitats. Wildlife do use roads, particularly non-motorized roads. Roads,

however, are not needed by wildlife. Goshawks are known to hunt snowshoe hares, Forest grouse and other prey species, along open habitat created by Forest roads. Some roads in the analysis area allow motorized access to bisect breeding/rearing, foraging, hiding or security habitats.

Roads open to motorized traffic reduce elk habitat effectiveness and security. Analysis of elk summer habitat effectiveness indicated that in some portions of the Forest we are at or near minimum Forest Plan standards for open road densities.
Wolverines are the most sensitive MIS species to motorized access. They typically inhabit remote mountainous areas where human disturbance is lower. Wolverines typically avoid human disturbance and roaded landscapes.

TW 2: How does the road system facilitate human activities that affect habitat?

Human activities (hunting, firewood removal, trapping, vegetation management, etc.) are the most significant factors affecting wildlife habitats and populations within the analysis area. Elk calving habitats, security areas and heavily used seasonal habitats (both winter and summer) can be adversely affected by human activities, particularly motorized access. Standing and down dead wood is important to pileated woodpecker and marten habitat. Roads facilitate the removal of these habitat components for firewood. A major implication is that some MIS habitats are likely underused.

TW 3: How does the road system affect legal and illegal human activities (including trapping, hunting, poaching, harassment, road kill, or illegal kill levels)? What are the effects on wildlife species?

A high-density open road system generally encourages both legal and illegal harvest of elk, white-tailed deer and moose. Unrestricted motorized access during hunting season limits elk security habitat and increases elk vulnerability to hunters. An open road system minimizes the time and energy that hunters, trappers and poachers need to expend in accessing the area. Large areas can be covered quickly and with minimum effort. A high-density open road system also decreases the likelihood that poachers will be caught due to the amount of area that must be patrolled and alternate routes of travel that poachers can utilize to avoid detection. The Nez Perce Forest only has 25 percent of the road system in the "open" category (2004 Forest road summary data).

Moose are particularly vulnerable to poaching since they are less secretive in their behavior than either elk or deer. Moose often utilize open areas that deer and elk avoid, making them easy targets for poaching activities. Unrestricted motorized access increases moose vulnerability to illegal hunting harvest.

TW 4: How does the road system directly affect unique communities or special feature in the area?

Riparian areas, elk calving and security habitats and large (contiguous) patches of older forest are the special habitat features on the Forest. Impacts to these special features have

negative implications for elk, moose, and wolves that rely on them for prey. Road effects in riparian habitats also likely impact boreal toad and fisher.

A large percentage of the pregnant elk cows bear young on the spring range, particularly on broad gentle ridges. Calving and fawning areas are important to wolves because they often prey upon newborn ungulates. Seclusion from human disturbance, most typically disturbance related to motorized activity, is important. The best of these habitats are located on relatively gentle, dry terrain with lush grass forage.

Economics

EC 1: How does the road system affect the agency's direct costs and revenues? What, if any, changes in the road system will increase net revenue to the agency by reducing cost, increasing revenue, or both?

A detailed cost/benefit analysis is not feasible at the Forest-scale. The appropriate scale according to "Roads Analysis, FS-643 Miscellaneous Report" is that where costs and revenues affected the roads in question is measurable and relevant to address the issues concerned with financial efficiency of the agency. At the Forest-scale certain roads remain open and are maintained to provide access to other ownership, facilities, and to provide primary access to the national Forest. Other roads that are primarily for local access, are best addressed at the project level when alternative levels of management are being considered, and there are measurable costs and returns.

One way for the Forest to increase revenues would be to increase harvest of timber in the suitable base identified in the 1987 Forest Plan. However, this approach would not address long-term road maintenance funding needs and would, in fact, increase the Forest road maintenance obligation as more roads were constructed.

More intensive management of the suitable timber base that is currently roaded would reduce road maintenance costs while increasing revenue. Intensive use of the existing road system for fire fuels reduction projects could dramatically reduce the cost of mechanical fuels treatments and facilitate the removal of any commercially merchantable materials.

EC 2: How does the road system affect the priced and non-priced consequences included in economic efficiency analysis used to assess net benefit to society?

This analyis does not attempt to address this question. Perhaps a with and without analysis could be run to attempt to quantify these items but this is outside the scope of this analysis.

EC 3: How does the road system affect the distribution of benefits and costs among affected people?

This is beyond the scope of this analysis.

Commodity Production

TM 1: How does road spacing and location affect logging system feasibility?

This question was answered by Donald Maxwell Matthews in "Cost Control in the Logging Industry", McGraw-Hill Book Company 1942. He essentially documented a break-even point concept where the costs of building and maintaining a road are balanced against the logging cost for the distance machines log between roads. Since in most cases the longer the distance logs are yarded (by tractor, cable, or helicopter) the greater the yarding cost in an exponential relationship.

The Nez Perce National Forest has a variety of topography from gentle slopes, to short steep slopes, to very long and steep slopes. In many cases, road location is set by the topography. The best location for a road is where the sideslope is gentle enough that expensive endhaul of waste material is not needed, where the topography is stable, where stream crossings are reduced, and other resource considerations are met. The Forest attempts to locate roads where they lie best on the land and logging systems are chosen to match the road location and silvicultural objectives.

TM 2 and 3: How does the road system affect managing the suitable timber base and other lands? How does the road system affect access to timber stands needing silvicultural treatment?

The arterial and collector roads are the portions of the road system that can be addressed at the Forest-wide scale while local roads are best dealt with at the watershed or project level. Design elements for arterial and collector roads generally are chosen to provide for traffic speeds that are greater, curves that are broader, and surfacing that is pavement or gravel in most cases. This allows efficient transportation of people and commodities out of and into the Forest. The greater volume of traffic creates more maintenance and sometimes there are revenues or user maintenance fees that offset the cost of this maintenance. These roads are the main avenues of access to the Nez Perce National Forest once one leaves the county, highway district or state highway. They are the only efficient means of transporting timber, pulp or biomass from the woods to processing mills. Water, rail, and air transport of Forest products has limited application due to high impact to the environment or high cost.

Much of the Nez Perce National Forest suitable timber base has arterial or collector road access to the general area. Local roads are then needed to provide access to the immediate area needing silvicultural or other treatment.

Minerals Management

MM 1: How does the road system affect access to locatable, leasable, and salable minerals?

The quantity and weight of material in a mineral operation is such that the movement of gold ore, gravel, etc. needs to be by heavy truck. This requires a road system to provide access to the source of the mineral at a mine or quarry. Locatable minerals, like gold and silver, fall under the General Mining Law of 1872 (as amended) and the claimant may mine mineral deposits on valid claims. The Forest Service manages the surface resources, thus regulations are in place to protect the surface resources and to reclaim disturbed area.

The National Forest has more discretion on whether to allow the extraction of leasable or salable minerals. Location of locatable, leasable (coal or oil and gas), and salable (gravel) minerals on the Nez Perce National Forest is limited to a number of fairly small areas. Thus new roads needed to access mineral deposits would be limited.

Range Management

RM 1: How does the road system affect access to range allotments?

Some of the grazing that occurs on the Forest is associated with transitory habitat that is created along roads. Many range allotment plans incorporate Forest Service roads into their approved grazing system or as driveways to and from the allotment. Roads can reduce permittee operating costs by providing motorized access to allotments. Administratively, the road network now allows range conservations to access allotments quickly by using vehicles rather than horses.

No peer-reviewed studies have assessed the effects of national forest roads, or roads in general, on livestock grazing.

Water Production

WP 1: How does the road system affect access, constructing, maintaining, monitoring, and operating water diversions, impoundments, and distribution canals or pipes?

The existing road system is generally sufficient to access existing water diversions, impoundments, and distribution canals or pipes.

WP 2: How does road development and use affect water quality in municipal watersheds?

This is addressed by project on a case-by-case basis for road development.

WP 3: How does the road system affect access to hydroelectric power generation?

Generally, road access is adequate to access the limited number of hydroelectric power generation facilities on the Forest.

Special-Use Permits

SP 1: How does the road system affect access for collecting special Forest products?

People gather firewood, berries, mushrooms, Christmas trees, moss, decorative foliage and other special Forest products in the Nez Perce National Forest. Due to the weight and bulk, firewood is generally transported in pickup trucks. Without a road system, firewood could not be collected for personal use. Most of the other products are gathered within several hundred feet of existing roads. Thus roads are necessary to provide access to many special Forest products.

SU 1: How does the road system affect managing special-use permit sites (Concessionaires, communication sites, utility corridors, etc.)?

The existing road system is sufficient to deal with almost all recreation special uses. Safe and efficient access to areas under Special Use Authorization has a direct effect on the economics of an operation, either through volume of customers, or operation and maintenance costs. Outfitters and guides under special use may or may not use Forest roads to access trailheads that they use to provide a back-country experience to their clients. Several trailheads are along State Highways, but the remaining access for outfitters and guides is from Forest roads.

Communication sites and utility corridors are normally constructed and maintained from existing roads, or low standard access is developed to establish the facility.

General Public Transportation

Background

Access to the Nez Perce National Forest is from a network of highways, highway district and county roads. The main routes are U.S. Highway 12, which provides east-west connections across the northern portion of the forest, and U.S. Highway 95, which provides north-south connections in the western portion of the forest, State Highway 13, running north-south, State Highway 14, running east-west through the center of the Forest, and the Idaho County Dixie Highway running north-south.

Communities located within or near the forest include: Grangeville, Stites, Harpster, White Bird, Riggins, Newsome, Elk City, Red River, Dixie, Kooskia, Syringa, and Lowell. These communities are located on the main public access routes to the forest so it can be theorized that they played a role in the historic transportation system

development on and around the forest. In the past they have been centers of activities for timber and/or timber support activities.

Forest Highways

Eight roads on the Forest have been designated as Forest Highways. These roads provide important access to National Forest System lands and connect to main public roads. A portion of the Forest Highway may be located on a public road also designated as state highway or county road. The dual designation represents the fact that a major component of the traffic on the road originates or results from the need to access national forest land activities that include: recreation, hunting, fishing, management of resources, and other related activities. Forest Highways also serve communities within and adjacent to the National Forest. These roads are major connections of the Forest roads with the county and state highway road systems.

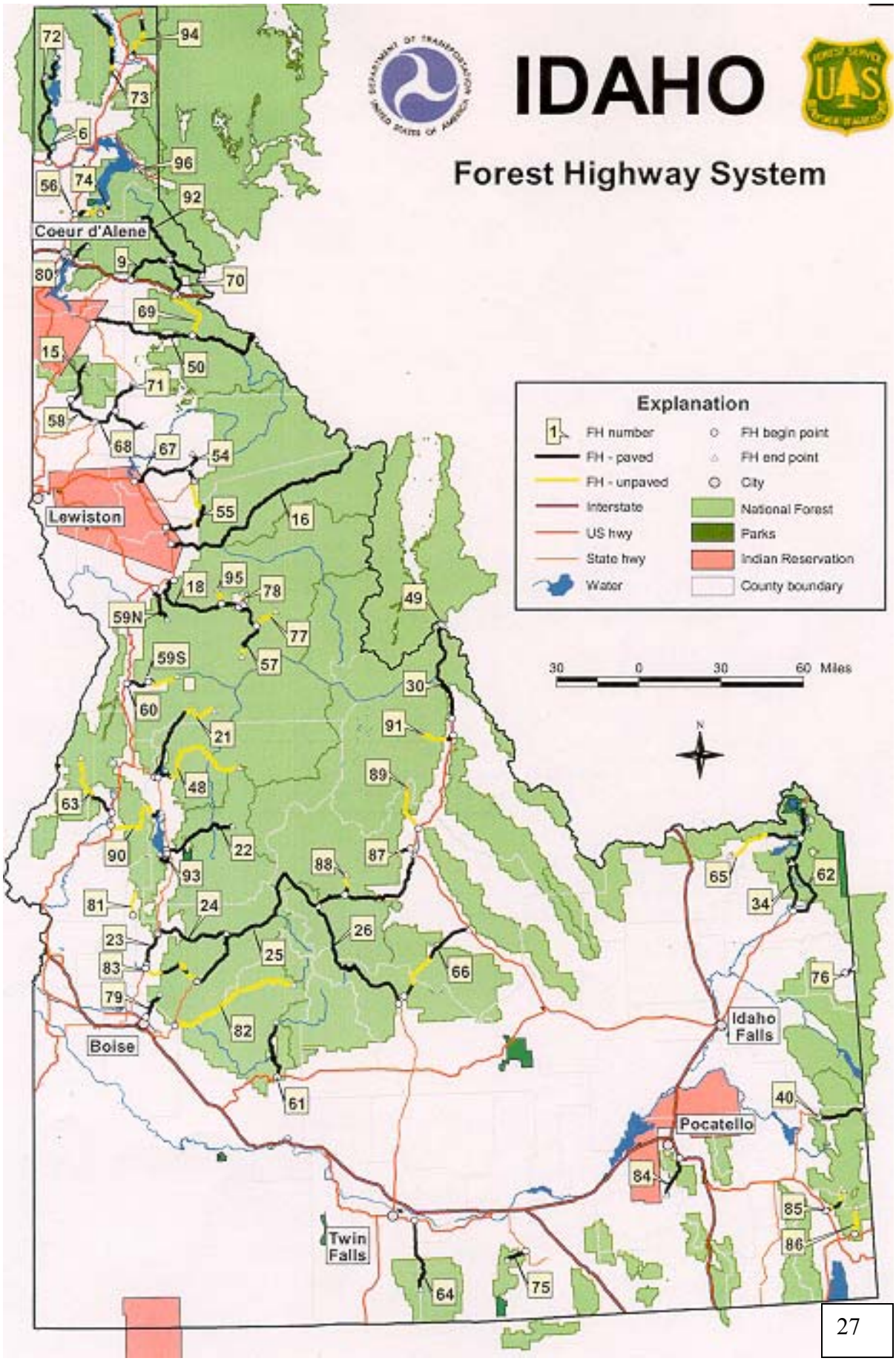
IDAHO
Forest Highway System
Explanation
FH number
FH - paved
FH - unpaved
Interstate
US hwy
State hwy
Water
FH begin point
FH end point
City
National Forest
Parks
Indian Reservation
County boundary
30 0 30 60 Miles
N
Coeur d'Alene
Lewiston
Boise
Twin Falls
Pocatello
Idaho Falls

Table 4 - Forest Highways

Forest Highway	Forest Highway Name
FH - 18	Elk City Highway
FH - 57	Elk City - Dixie
FH – 59N	Grangeville – Salmon (North Section)
FH – 59S	Grangeville – Salmon (South Section)
FH - 60	Salmon River Road
FH - 77	Upper Red River Road
FH - 78	Elk Creek Road
FH - 95	Newsome Creek Road

Public Forest Service Roads (PFSR)

Public Forest Service Road is a new designation that will to be given to important National Forest System arterial and collector roads that meet specified criteria. These are the service roads that serve as principal public access routes to the Forest. The intent of the PFSR program is to provide safe and environmentally sound access for public use. Funding for the program is proposed to come from the Highway Trust Fund. Although project proposals have been developed, funding for the program is pending approval.

The Nez Perce National Forest has nominated 19 roads for PFSR consideration. The program was limited to those roads suitable for passenger car use that provide the major forest access.

The criteria for PFSR designation are those roads that:

a. Are under Forest Service jurisdiction.
b. Provide unrestricted access (other than seasonal snow closures, emergency closures, or scheduled closures for wildlife).
c. Serve a compelling public need.
d. Primarily serve Forest Service resource needs such as access to lakes, wilderness areas, or developed campgrounds, etc.
e. Roads that typically *do not* provide local community needs such as school bus, access to summer homes, etc. (Those would qualify for Forest Highway designation.)

The Forest compiled a list of proposed PFSRs in January 2000. Project proposals were subsequently developed for the 4 highest priority projects.

TABLE 5 – Proposed Public Forest Service Roads

Road Number	Road Name	Estimated Cost
NFSR 354	Slate Creek Road	$ 525,000
NFSR 444	Gospel Road	$ 957,000
NFSR Multiple	Meadow Creek Road	$ 2,057,000
NFSR 244	Lighting Creek	$ 2,407,000

National Forest System Roads (NFSR)

There are three functional classes of National Forest System Roads on the forest. They are arterial, collector and local roads. NFSRs are maintained to varying standards depending on the level of use and the individual road management objectives. There are five maintenance levels used by the Forest Service to determine the work needed to meet management objectives and preserve the investment in the road. These maintenance levels are described in FSH 7709.58 – Transportation System Maintenance Handbook.

The arterial, collector and important local roads being maintained to maintenance levels 3, 4 and 5 are the Forest system roads being managed for public use. These roads receive the highest traffic and are the most costly to maintain to standard.

GT 1: How does the road system connect to public roads and provide primary access to communities.

Most communities are accessed by public roads maintained by State, County or Highway District. Newsome townsite is a community that is an exception being accessed by the Newsome Creek road 1858, a National Forest System Road.

GT 2: How does the road system connect large blocks of land in other ownership to public roads? (Ad-hoc communities, subdivisions, in holdings, and so on)

The State Highways and County Roads network described previously provide primary access to the Forest. Depending on the location of the other ownership, the Forest Highways, Public Forest Service Roads, and main National Forest System Roads are used for access.

Inside the forest boundaries the majority of the land is in public ownership and managed by the Nez Perce National Forest. There are a number of small private parcels and scattered patented mining claims on the forest.

GT 3: How does the road system affect managing roads with shared ownership or with limited jurisdiction? (RS 2477, cost-share, prescriptive rights, FLPMA easements, FRTA easements, DOT easement)?

Several roads crossing the National Forest fall under the jurisdiction of agencies other than the Forest Service. When desirable, cooperative agreements should be established to share road improvement and maintenance responsibilities when all partners can benefit. The Forest Service, Federal Highway Administration, and Idaho Transportation Department have developed two Memorandum of Understandings (MOUs) to set forth general procedures for planning, programming, environmental analysis, construction and maintenance of Forest Highway and State Highway on National Forest System lands.

There are no cost-share agreements with private or public landowners on the Forest. The diversity of ownership and lack of any sizable inholdings does not indicate a need to pursue agreements of this type.

Rights of access by law, reciprocal rights, or easements are recorded in forest files and county courthouse documents. The Forest recognizes these rights and works with the owners to preserve access while protecting the natural resources and facilities on adjacent National Forest System lands. There is also an understanding by the Forest Service that individuals or entities may have established valid rights, unknown to the Forest Service at this time, to occupy and use National Forest lands and roads. The courts have established that such valid outstanding rights may be subject to some Federal regulation. See Sierra Club vs. Hodel, 848 F 2d. 1068 (10th Circuit, 1988). This analysis recognizes that such valid outstanding rights may exist and the Forest Service will certainly honor such rights when it is subsequently determined that the specific facts surrounding any claim to such rights meets the criteria set forth in any respective statute granting such occupancy and use. See Washington County vs. The United States, 903 F. Supp. 40 (D. Utah, 1955).

GT 4: How does the road system address the safety of road users?

In 1975, the Forest Service developed a Memorandum of Understanding with Federal Highway Administration that required the Forest Service to apply the requirements of the National Highway Safety Program, established by the Highway Safety Act, to all roads open to public travel. In 1982, this agreement was modified to define "open to public travel" as "those roads passable by four-wheeled standard passenger cars and open to general public use without restrictive gates, prohibitive signs…" Most roads maintained at level 3, 4, and 5 meet this definition. Design, maintenance, and traffic control on these roads emphasizes user safety and economic efficiency.

The largest proportion of road maintenance and improvement funds allocated to the Forest is spent on these higher standard roads. Safety work such as surface maintenance, roadside clearing and installation and maintenance of warning and regulatory signs are performed on an annual basis. During the winter, these roads are not plowed open and some are subject to seasonal restrictions to prevent road damage during the spring thaw. Traffic control signing follows standards set forth in the Manual on Uniform Traffic Control Devices (MUTDC).

When accidents occur on forest roads, often the Forest Service is not immediately informed unless an employee is involved. Accidents involving only public motorists are reported to the local sheriff or state patrol, if reported at all. When the Forest does become aware of an accident, an investigation is initiated to attempt to identify the cause. If a feature of the road is found to be unsafe, addressing the condition becomes a high priority.

Road condition surveys reveal a backlog of over $54 million in deferred maintenance work items on level 3-5 roads on the Forest. A large portion to this backlog is a result of deteriorated road surfacing on aggregate surfaced roads. In the past, road surfacing

projects were planned as part of commercial timber sale activities. The decline of this program has reduced the Forest's ability to fund this work. Many arterials and collectors do not meet standards for alignment or roadbed width. Built originally for commercial use, design considerations did not emphasize the high volumes of public recreation traffic that the roads are experiencing today. Many roads are lacking sight distance, turnouts, and adequate lane width needed for the higher volume and speed of the traffic occurring. Roadside brushing is frequently less than adequate on these roads. Warning and regulatory signing contributes significantly to the maintenance backlog.

Administrative Use

AU 1: How does the road system affect access needed for research, inventory, and monitoring?

Road access assists with research, inventories, and field monitoring. Limited or no road access increases time and costs for field observations. Access to individual watersheds depends on the arterial and collector roads. The Forest roads provide access to inventory and monitoring sites throughout the Forest.

AU 2: How does the road system affect investigative and enforcement activities?

The arterial, collector, and local road system on the Nez Perce National Forest provides good access for investigative and law enforcement activities on the developed portion of the Forest. Many acres of the Forest are either wilderness or roadless and access to enforce regulations and laws or investigate crimes is often difficult. Enforcement officers either have to hike or ride horses into the wilderness and many of the roadless areas, or use trail bikes or helicopters to access other areas where this type of transportation is allowed and efficient.

The road system also allows increased public access, which may result in violations of laws and regulations. A number of violations committed pertain to access restrictions in place to limit motorized access to sensitive areas. Several National Forests in the northern Rockies are discovering "meth labs" or material dumped from meth labs on the National Forest.

Protection

PT 1: How does the road system affect fuels management?

To implement safe post harvest fuel management activities, it is necessary to have the ability to access treatment units with fire personnel and equipment. The current road system provides access for planned fuel management activities on many parts of the Nez Perce NF. The road system plays an integral role in providing defensible boundaries and in some cases will act as fire control lines for the units that are situated along Forest roads. In other areas where treatment units are not situated next to, or in close proximity to roads, the road system will act as a staging area for helicopter operations to provide

access to those treatment units. Fuels management generally focuses on two areas: 1) treatment of activity fuels created by management actions, and 2) treatment of forest types with high fuel levels which have had no previous management actions.

A majority of the fuel management activities on the Nez Perce NF have included removal of forest products and are considered "activity" fuels treatment. After the initial treatment of forest products removal, the natural fuels in addition to the activity fuels, are generally treated through one or a combination of the following treatments: prescribed burning, underburning, or handpiling in combination with burning.

The broadcast burning and underburning of activity fuels are generally conducted throughout the spring and fall months as weather permits. To implement a safe burning operation it is necessary to have the ability to access units with engines in case the prescribed burn escaped. This is especially important in the portions of the Forest with intermixed ownership and varying degrees of slash disposal/treatment. To reach some units that would lend to early burning the snowplow may be used to provide necessary access for vehicles, equipment and personnel.

Treatment of forest types with high fuel levels focuses on landtype associations (LTAs) with the shortest fire return intervals that have been most influenced by fire suppression. Stream breakland (which have fire return intervals ranging from 25-50 years on thin-soil, south aspects to 76-150 years on deep-soil, north aspects) and colluvial midslope LTAs (fire return intervals range from 0-25 years on extremely dry, basalt areas to 76-150 years on mid-elevations with deep soils) tend to have the highest fuels loadings compared to historical levels due to the effects of fire suppression. Combinations of timber harvest (including pre-commercial and commercial thinning, slashing, and regeneration harvests) and prescribed fire (both underburning and mixed intensity) may be conducted to reduce fuel loadings on these areas. Road access will facilitate some of these actions, but due to the typically steep terrain on these LTAs, aerial fuels management activities will predominate.

Fuels management on portions of the Forest without road systems is conducted through consideration of both management ignited burns and natural wildfires. Management ignited fires can be accomplished through aerial and/or ground methods which rely less on road access.

PT 2: How does the road system affect the capacity of the Forest Service and cooperators to suppress wildfires?

Road surfaces and road prisms provide a substantial physical fuel break within Forest stands. Depending on their location and orientation on the topography, they may play a significant role in containment and control of wildfires by way of strategic or advantageous location in relation to an emerging fire event. Tactical suppression strategies often depend on roads used as anchor points, fire control lines, escape routes, and safety zones. Fire suppression forces (both Forest Service and private cooperators)

also often require road access to provide logistical support in the form of primary routes for transport of essential equipment and supplies.

The road systems generally complement access to suppress wildland fires when they are situated in the roaded lands on the Nez Perce NF. Cooperators that may assist the Nez Perce National Forest and other Forest Service crews in suppression of wildland fires would use the road systems to access forest lands. In the event that a wildland fire is not accessible by road, and aerial suppression tactics are utilized, the road system may be used as a landing or staging area for use of helicopters during suppression efforts.

PT 3: How does the road system affect risk to fire fighters and to public safety?

Fire suppression and prescribed fire are inherently hazardous duties. Good routes in and out typically decrease risks to firefighters' safety; however the "mix" of activities, fire management and visitor access, increases risks to both fire fighter and public safety. These risks potentially could be from smoke, vehicle accidents, falling snags, entrapment etc.

A minor effect of good road access may be an increase in industrial and non-industrial caused fires. Currently human caused fires account for a small amount of the Nez Perce National Forest fires, although several human caused fires have resulted in high suppression costs and resource damage in recent years.

PT 4: How does the road system contribute to airborne dust emissions resulting in reduced visibility and human health concerns?

Airborne dust generated by vehicle traffic (or high wind velocity) along Forest roads is comprised of dry, powder-like materials. The amount of particulate matter produced is related to: 1) road surface material, including particulate size, element structure, and ratio; 2) moisture content; 3) volume, weight, and type of traffic over the road surface. When a road surface is designed with features including variable grades of course and dense material, and traffic volume is relatively low, there are generally not sufficient quantities of airborne dust to create a human health concern or visibility issues. This is especially true of road systems in air sheds that are considered remote, with low population, and limited in terms of use or traffic volume, which is the case of many roads on the Nez Perce NF.

Other factors include the amount of use in relation to seasonal weather conditions and precipitation amounts effecting moisture quantities on road surfaces. Generally, on administrative use roads, conditions favoring higher levels of suspended dust particles in the air would be limited to the summer months (June, July and August) and subject only to periods between rainfall during those months when dry conditions allow for dust to be airborne. Mitigation measures such as road surface watering have been very effective in suppressing dust created by traffic during dry season conditions.

Recreation

UR 1 and RR 1 have been combined: Is there now or will there be in the future excess supply or excess demand for unroaded or roaded recreation opportunities?

Roads are the primary facility used by the public to access the National Forest. Level 3, 4, and 5 maintenance roads are intended to provide passenger vehicle access for most roaded recreation opportunities. Most of the roads on the Forest were built for timber harvesting. Motorized recreation use has increased over the years and so has the need to provide safe access to and through the Forest. When road maintenance is not performed to desired standards, the quality of the recreation experience may decrease and use may be concentrated on better-maintained roads.

To assess the unroaded and roaded recreation opportunities on the Forest information from the roadless area inventory and the Recreation Opportunity Spectrum (ROS) as documented in the current Forest Plan was reviewed.

The Forest has 508,550 acres of inventoried roadless area, which provide both motorized and non-motorized recreation opportunities. About 42 percent of the Forest, including the Selway-Bitterroot Wilderness, Gospel Hump Wilderness, Hells Canyon Wilderness, and River of No Return Wilderness areas are designated wilderness and undeveloped. Future management allocation decisions in a revised Forest Plan could change the supply of unroaded areas. Standards in the revised plan should explain where motorized and non-motorized recreation opportunities could be provided.

Roaded recreation opportunities are available on the Forest with the majority existing on the western portions of the Forest. Roaded natural settings are found on maintenance level 3, 4, and 5 roads where passenger cars have access while level 2 maintenance roads provide a semi-primitive motorized recreation experience.

UR 2 and RR 2: Is developing new roads into unroaded areas, decommissioning of existing roads, or changing the maintenance of existing roads causing substantial changes in the quantity, quality, or type of unroaded or roaded recreation opportunities?

Approximately 83 miles of road have been constructed in inventoried roadless areas associated with vegetation management since 1987. This impacted the roadless character of roughly 18239 acres or 4 % of the inventoried roadless acreage on the Nez Perce National Forest. This is not a substantial change to the quantity or quality of unroaded recreation opportunities.

Decommissioning of roads has not caused a substantial change in the quantity or quality of roaded recreation opportunities. Approximately 251 miles of road have been decommissioned since 1992 (2004 road summary data).

Due to a lack of funds and resources, many roads haven't been maintained regularly. Decreasing maintenance due to reduced funding levels means the intended maintenance standard and desired road condition may not be achieved on many roads. Funds to provide for road repairs, bridge maintenance and replacement, and to replenish roadway surfacing are extremely limited. The Forest may need to close roads roads in the near future to address safety issues. The potential to increase opportunities for roaded and unroaded recreation is dependent on funding, public input and agency policy.

Traditionally, road construction and reconstruction have been paid for by timber management activities. Trends in budgets for timber dollars to construct and maintain roads have decreased and future funding for road construction and maintenance might have to come from another source. Opportunities may exist to reconstruct or improve maintenance to facilitate recreation by providing loop opportunities on existing roads or a combination of roads and trails.

UR 3 and RR 3: What are the adverse effects of noise and other disturbances caused by developing, using, and maintaining roads, on the quantity, quality, and type of unroaded and roaded recreation opportunities?

This is not an issue at the Forest scale. It will be addressed, if it is an issue, at the sub-forest scale.

UR 4 and RR 4: Who participates in unroaded recreation in the areas affected by constructing, maintaining, and decommissioning roads? Combined with questions UR 5 and RR 5: What are these participants' attachments to the area, how strong are their feelings, and are alternative opportunities and locations available?

All Forest visitors use the arterial, collector and local roads (level 2-5 maintenance level) to access the Forest. Maintenance levels 3-5 are suitable for passenger vehicles while level 2 roads are intended for high clearance vehicles. Some of the primary activities are driving for pleasure, access to hunt and fish, camping, gathering firewood, and travel to trailheads to access the backcountry for dispersed recreation or to use the Wilderness areas. Visitors come from local communities in northern Idaho as well as many other states, particularly California, Oregon and Washington.

Public input over the years during project scoping and analysis indicate that the public has very strong feelings concerning motorized versus non-motorized recreation in many parts of the Forest. The roaded areas Forest are very important to residents of local communities like Grangeville, Elk City and Dixie for motorized recreation activities. Attitudes of motorized and non-motorized supporters are still strongly polarized.

Passive Use Values

PV 1: Do areas planned for road entry, closure, or decommissioning have unique physical and biological characteristics, such as unique natural features and threatened or endangered species.

The entirety of the forest is within the range of anadromy for several aquatic species. Several of these populations are listed species under the terms of the endangered species act.

The forest also has habitat for a number of terrestrial species, many of which are wide ranging, that are also listed.

The forest also has a number of plant species listed as sensitive.

Unique features and characteristics for potential and proposed road projects are typically evaluated and disclosed through project specific analysis in accordance with the National Environmental Policy Act.

PV 2: Do areas planned for road construction, closure, or decommissioning have unique cultural, traditional, symbolic, sacred, spiritual, or religious significance?

The Nez Perce Tribe is an historic user of the lands that comprise the Nez Perce National Forest. All of the Forest is ceded territory of the Nez Perce Tribe, which retains strong traditional cultural ties to these lands. This tribe also retains rights to hunt, gather, and fish at usual and accustomed places on these ceded lands through the Treaty of 1855. This tribe has several locations that are significant for traditional gathering, fishing, hunting, and religious purposes. Several locations on the Forest are held to be sacred by members of the Tribe. Tribal members are active users of these traditional areas. The Nez Perce Tribe is regularly consulted on Forest and project analyses.

PV 3: What, if any, groups of people (ethnic groups, subcultures, and so on) hold cultural, symbolic, spiritual, sacred, traditional, or religious values for unroaded areas planned for road entry or road closure?

The Nez Perce Tribe has historic, legal, and traditional ties to the lands that make up the Nez Perce National Forest. In addition, other groups such as environmental advocates, commodity advocates such as logging companies and loggers, and motorized recreationists all have traditional or symbolic interests in the Nez Perce National Forest. The Tribe, groups and individuals are routine contributors to NEPA analysis and project appeals.

PV 4: Will constructing, closing, or decommissioning roads substantially affect passive-use values?

Passive-use values, existence or bequest of the values, cover a wide spectrum of publics, both nationally and locally. Many people who live in urban areas and may never visit the Forest hold passive use values for the existence of the wide range of opportunities and resources on the Forest. Bequest values, related to passive or active use, are also important to publics for either protecting roadless areas or for future access opportunities. Maintaining roadless areas as roadless is supported by some publics both nationally and

locally. There are other people nationally and locally who would like to have road access to roadless areas. The Forest Service manages and protects these values in a manner that balances diverse public values.

There are people and organizations that hold high passive values for areas without roads or for future roaded access. The physical and biological characteristics vary across the Forest, as do the passive use values the people hold for them.

The Nez Perce National Forest, including designated areas, is primarily an unroaded Forest. Approximately 65 % of the Forest is in Inventoried Roadless Areas or Wilderness. Road building proposals for inventoried roadless areas have resulted, and will likely continue to result in substantial public controversy from passive use advocates.

Social Issues

SI 1: What are people's perceived needs and values for roads? How does road management affect people's dependence on, need for, and desire for roads?

Many visitors from states other than Idaho as well as Idaho residents use roads to drive to their destinations or for commercial activities. Roads are used to transport goods and access recreation and commercial activities. Well-maintained roads facilitate recreation experiences and commercial activities; poorly maintained roads decrease the quality of visitor's recreation experience and may make them difficult or impossible. Roads are not always viewed as a beneficial facility on the Forest. Many people feel the Forest has too many roads and no further road construction is necessary. Some would like to see more decommissioned. Others view roads as a necessary facility for recreation and Forest management.

SI 2: What are people's perceived needs and values for access? How does road management affect people's dependence on, need for, and desire for access?

Most of the roads on the Forest were built to access timber management projects. Once the public has authorized access by road to an area it is very difficult to restrict or reduce the roaded access. Summertime access for camping, fishing and ATV use and fall access for hunting are important for many visitors. Access for dispersed non-motorized recreation activities requires roads to trailheads and entry points.

There are many important access roads on the Forest. A few examples are the Selway River Road, the Grangeville- Salmon Road, the South Nez Perce Trail Road, and the Newsome Creek Road. These and many others provide access to areas of high value to many people.

Many people in local communities feel they are dependent on roads into the Forest to support existing wood products and other businesses in Idaho County. Some groups and individuals in the more urban areas maintain views that tend to be more varied.

SI 3: How does the road system affect access to paleontological, archaeological, and historical sites?

Roads often provide access to archaeological and historical sites. This has potential for both positive and negative effects to these resources. Roads provide easy access to many sites, which allows managers to more effectively monitor the condition of these non-renewable resources. Further, it allows the public to visit sites that represent their history and culture. One of the greatest threats to the integrity of these sites, however, is through illegal collecting, digging and looting. Roads provide greater access to sites for these activities as well.

SI 4: How does the road system affect cultural and traditional uses and American Indian treaty rights?

In the Treaty of 1855, the Nez Perce Tribe retained the right to fish at usual and accustomed places, and also to hunt and gather plants on lands ceded to the United States by the Tribe. Roads often provide improved access to these traditional areas. While roaded access is not a treaty right, in some cases it enhances the ability of the tribe to retain and pass-on traditional beliefs and activities. The Tribe's best source of traditional knowledge and practice is in its elders who may sometimes only be able to access traditional areas when roads are available.

However, roads can also lead to conflicts with traditional uses. In some existing situations on the Forest, roads allow non-tribal members to intrude upon traditional activities. In cases where these activities require isolation and solitude, roads may lead to significant conflicts between traditional uses and other uses.

The Nez Perce Tribe is regularly consulted during project planning. Their input will continue to be sought for transportation planning issues on the Forest.

SI 5: How are roads that are historic sites affected by road management?

Some of the roads on the Nez Perce National Forest, such as portions of the Elk City Wagon Road, are historic sites. In other cases, features such as bridges may also be eligible for the National Register of Historic Places even when the road is not. Historic roads and features are subjected to routine maintenance and repair since keeping them open and in use are considered to be a significant part of managing and preserving these sites. For projects where the integrity of the road may be affected by proposed activities, those affects are considered and consultation with the Idaho State Historic Preservation Office, the Advisory Council on Historic Preservation (as appropriate and required) and other interested parties is conducted to address historic preservation concerns and to develop methods to best mitigate effects.

SI 6: How is community social and economic health affected by road management (for example, lifestyles, businesses, tourism industry, infrastructure maintenance)?

Communities are culturally and economically tied to the Forest in part by the Forest road system. Commodity users rely on the road system just as do local and non-local Forest visitors for access to desired locations on the Forest. Most of the roads were built to facilitate the transportation of wood products. Today, the Forest is selling less timber, but some roads remain busy as recreation use and other activities continue. Commodity users, resource managers, and the public at large rely on the transportation system of the Nez Perce National Forest.

The Forest road system is very important to the residents of the local communities in and around the Forest. Access for hunting, fishing, firewood gathering and family outdoor activities rely on maintained roads.

SI 7: What is the perceived social and economic dependency of a community on an unroaded area versus the value of that unroaded area for its intrinsic existence and symbolic values?

Communities vary in their dependency and values for unroaded areas. Some communities are more interested than others depending on the diversity of their economy and its dependence on Forest resources. For many local residents, unroaded areas are there for a few visitors to use and enjoy. Many of these residents see roads as imperative to the management of the Forest for timber production to support the local mill or for fighting wild fires. Many believe the opportunity cost of not building roads into unroaded areas outweighs the cost of road development and long-term maintenance. Other publics believe there are too many roads on the Nez Perce National Forest.

SI 8: How does road management affect wilderness attributes, including natural integrity, natural appearance, opportunities for solitude, and opportunities for primitive recreation?

There are four designated wilderness areas on the Nez Perce National Forest. The Selway-Bitterroot Wilderness (559,531 acres), the Gospel Hump Wilderness (205,796 acres), the Frank Church River of No Return Wilderness (110,773 acres) and the Hells Canyon Wilderness (59,900 acres) account for about 42 % of the total Forest acreage (Land Areas of the National Forest System, 2003). Roads provide important access facilities to trailheads for visitors to enter wilderness. In some situations, roads also provide the means for unauthorized motorized activities in wilderness, which would impact opportunities for solitude and primitive recreation.

SI 9: What are the traditional uses of animal and plant species within the area of analysis?

The Nez Perce Tribe traditionally used the lands of the Nez Perce National Forest to harvest camas, biscuitroot, berries, and several other plants for food and construction of

shelters and implements. The area was also used traditionally to hunt elk, deer, bear, and other species. Among other fish species, salmon was traditionally harvested from the rivers and streams. Further, many of these streams are spawning areas for Salmon and other anadromous species, and the watersheds of the Nez Perce National Forest are important to maintaining viable salmon populations within the Columbia River basin. These traditional uses are ongoing, of considerable importance, and in the case of the Nez Perce are protected by treaty.

Hunting and fishing by non-tribal members can also be considered traditional uses of animal species. The area has long been known for its elk populations and the hunting opportunities those populations present. Other important game species include deer, bear, mountain lion, and a variety of bird species.

SI 10: How does road management affect people's sense of place?

People's sense of place is directly tied to the characteristics of an area, including unique features and the type of road accessing the area, that contribute to creating a special sense of place feeling to the area. Vegetation, scenic quality, recreation opportunities and special features are some of the important characteristics. Roads provide the means to access areas and by providing for driving comfort influence the type and amount of use. Any change in road management or during the development of a road needs to consider the factors that are important to sense of place for a given area.

Upgrading the maintenance level of a road may change the type and number of visitors to the areas accessed by the road. This could change the character of the users who consider the area to be special; it could change their experience and may displace current users with different values. Conversely, downgrading the maintenance level could result in fewer visitors and displace those visitors whose sense of place values are influenced by the type road accessing an area.

Civil Rights

CR 1: How does the road system, or its management, affect certain groups of people (minority, ethnic, cultural, racial, disabled, and low-income groups)?

The road system allows tribal members to access traditional harvest areas, sacred sites and other traditional sites on the Nez Perce National Forest. While road access is not required by treaty, the roads do provide increased access for tribal elders to traditional sites. This is important to maintaining and transmitting traditional knowledge to subsequent generations and maintaining the cultural identity of these tribes since elders often are a major source of traditional beliefs and knowledge.

Furthermore, the road system is used by all groups of people. Changes in road management, including closing or decommissioning any of the roads could have significant effects on all groups of people, including minorities and low income groups.

In some rural areas as a result of lifestyle and high levels of unemployment, citizens often have a greater need for roads than some more urban citizens.

Road barriers designed to restrict motorized travel on Forest roads in maintenance level 1 can some times limit access to disabled individuals. The Forest strives to provide equivalent recreation opportunities to disabled individuals by designing passage around road barriers where foot travel is encouraged. However, these efforts do not always meet the needs of all individuals. The Forest encourages individuals with special needs to work with Line Officers to arrange for reasonable accommodations to meet their needs.

Chapter 5 – Step 5 Describing Opportunities and Setting Priorities

The ID Team evaluated the arterial, collector and important local roads to assess the problems and risks associated with these roads. The primary tools used in the analysis were: direct resource input, a GIS based data assessment, a road analysis matrix and road management graph. Selected currently available GIS data was used as appropriate depending on the resource area and the need as determined by the responsible ID Team specialist

GIS Assessment: Potential effects of roads on the watershed and aquatic resources was analyzed using GIS computer technology combined with the Forest transportation inventory. This analysis was not limited to just the arterials, collectors and important local roads but included all currently inventoried classified roads on the Forest. This added many miles of local roads to the data set for a total of 3,873 miles of road analyzed. These additional miles of road allow a more accurate description of forest wide road indicators Road proximity to streams, roads upon landtypes susceptible to erosion, and roads upon landtypes susceptible to mass wasting were assessed.

The **Road Matrix** in Appendix C lists every arterial, collector, and important local road identified by the Forest and assigns lower, moderate or higher values or risk. This road analysis is an overview assessment, so the detail and accuracy for road risk and values contain a degree of subjectivity and potential for inaccuracies. The road matrix provides road-specific information that identifies roads that pose a higher risk to resources and can be used to assist with prioritizing sub-forest scale analysis or projects.

The **Road Risk-Value Graph** (Figure 2) was developed following the procedures used by the Medicine Bow National Forest Roads Analysis project (Medicine Bow NF Roads Analysis Report, 2001). It displays the information in the road matrix. The graph categorizes the values and risks of the 1,050 miles of road analyzed. The graph helps identify opportunities for managing the roads and prioritizing expenditures of Forest maintenance and improvement funds. The road risk-value graph is only a management guide and is not a decision concerning future road management.

The Nez Perce National Forest roads analysis IDT developed three road use *value* criteria and four *resource risk* criteria. The sum of the values of these criteria for each road segment was used to put the roads into the four-road management categories displayed in the graph. The IDT used the following values for each criterion High = 3, Medium = 2 and Low = 1. These are applied to each road segment displayed in the road matrix. A complete discussion of the risk and value criteria is provided in Appendix A.

Road use value criteria:

Three road use criteria were developed to evaluate the value of roads. The three criteria were:

1. Recreation Use Value
2. Access Value
3. Resource Management Value

Resource risk criteria:

1. Mass Wasting Risk
2. Surface Erosion Risk
3. Aquatic Risk
4. Wildlife Risk

A detailed discussion of the definitions for each value and risk criteria is discussed in Appendix A.

Road System Management Options

Using the established criteria to complete a road-by-road rating of risk and value, the following road management categories and graph were developed to display the information and present opportunities for management of the road segments analyzed. The graph and matrix help identify roads that may need additional investment to protect resources, roads that could have their maintenance level reduced, and the relative risk and value of the 1,050 miles of road analyzed.

Road Management Categories and Graph (Figure 2)

The four road management categories in the graph are based on value and risk. Within each category, there are possible management options for the roads.

Category 1: Higher Value/Lower Risk

- Maintain to standard by focusing road maintenance funds on these roads
- Review for potential resource concerns
- These roads form part of the potential minimum road system for the Forest

Category 2: Higher Value/Higher Risk

- These roads are a higher priority for sub-forest scale roads analysis to identify high-risk reduction needs
- Higher priority for capital improvement funding
- Increase maintenance funding to these roads to keep resource risks from increasing

Category 3: Lower Value/Higher Risk

- Higher priority for sub-forest roads analysis to identify high-risk reduction needs and to confirm road use value
- Potential for reducing maintenance level
- Consider decommissioning

Category 4: Lower Value/Lower Risk

- Lowest priority for expending annual road maintenance funds
- Moderate potential for decommissioning or reducing maintenance level

The road Risk vs. Value graph displayed in Figure 2 combined with the Road Matrix was used to identify roads for the four road management categories. A few factors need to be understood to correctly interpret this graph and the roads placed in the four categories.

The results are applicable only to the 1,050 miles of roads that underwent detailed analysis. It is important to understand that road values are relative only to other roads analyzed in detail. This means that a low value road in the graph may still have a relatively high value overall on the Forest compared to a road in the remaining 2,823 miles of local roads that were not analyzed in detail.

Those roads with a value of 6 or less potentially could have their current maintenance level reduced. Those roads with a risk rating of 7 or more represent roads that may be causing unacceptable resource impacts while those rated less than 6 are not as much a resource concern.

Category 2 (Higher Value/Higher Risk) roads would have the highest priority for potential increases in maintenance funding and Category 4 (Lower Value/Lower Risk) roads would be considered first for decreases in maintenance funding. The Road Matrix in Appendix C displays each road segment analyzed in detail and the resource value and resource risk for each road segment. Appendix B shows the mileage total for the four road management categories for each road analyzed in detail. Figure 3 is a map of the road management category for the roads analyzed in detail.

More detailed watershed or project level roads analyses will identify specific road management alternatives and potential site-specific projects. The results of the Forest-scale roads analysis will be integrated into the more detailed watershed analysis to provide a Forest-wide perspective concerning road management. In the event of conflicts between this report and ongoing NEPA analysis, refer to the more detailed NEPA analysis. Proposals will be subject to public review and comment during project level (NEPA) public involvement processes.

Figure 2. Road Risk/Value Graph

Nez Perce National Forest
Road Management Category Graph

	LOW POTENTIAL FOR INVESTMENT	HIGH POTENTIAL FOR INVESTMENT
Risk (10 to 7)	Category 3 **Lower Value/Higher Risk** 195 miles • Priority for risk analysis • Consider reducing maintenance level • Consider Decommissioning • Focus on resource concerns	Category 2 **Higher Value/Higher Risk** 389 miles • Priority for Investment (CIP, PFSR, etc.) • Focus on Resource Concerns
6 to 4 Risk	Category 4 **Lower Value/Lower Risk** 80 miles • Consider reducing maintenance level • Consider decommissioning • Review for potential resource concerns	Category 1 **Higher Value/Lower Risk** 386 miles • Maintain to standard • Review for potential resource concerns
Value (3 to 9)		Value

Vertical Axis: 4 to 6 = lower risk
7 to 10 = higher risk

Horizontal Axis: 3 to 6 = lower demand for investment (lower value)
7 to 9 = higher demand for investment (higher value)

Opportunities for Addressing Problems and Risks

Road Maintenance Costs

The average appropriated budget allocation available for planning, construction, and maintenance of the 3,873 miles of road on the Forest is approximately $948,000 (FY 2002, 2003 and 2004). The road budget is expected to remain constant or increase slightly during the next few years. Approximately 60% of the total road budget is available for road maintenance ($569,000). In contrast, the annual maintenance need to meet Road Management Objectives (RMOs) is $6,185,000 based on condition surveys. Current funding will complete just 9 % of needed annual maintenance for the entire classified road system.

The Forest-scale roads analysis includes 1,050 miles of arterial, collector, and important local roads. They comprise 27 % of the road mileage in the Forest transportation system. The annual maintenance cost needed to meet road management objectives for these roads is $2,682,000. This represents 43 % of total cost ($6,185,000) needed to maintain the entire road system to road management objectives.

Current funding ($569,000), if directed entirely to Forest-scale analysis roads, would be adequate to perform 21 % of needed annual maintenance. The road maintenance budget is not adequate to maintain the 1,050 miles included in the Forest-scale analysis, even if no road maintenance funds were spent on the other 73% of the road mileage not addressed in this analysis. Table 6 shows the annual maintenance cost for roads included in the analysis by maintenance level.

Table 6 – Annual Maintenance Cost Summary

Operational Maintenance Level	Miles	Annual Maintenance Cost Per Mile	Annual Maintenance Total Cost
2	229	$ 1,176	$ 269,000
3	786	$ 3,020	$ 2,374,000
5	35	$ 1,127	$ 39,400
Total	**1,050**		**$ 2,682,000**

Even though the major access roads shown in the Forest-scale roads analysis only represent 43% of the annual road maintenance need, they typically receive the majority of the available funding. Remaining funds of the maintenance budget are allocated to high priority needs identified annually on a limited set of local roads.

Condition surveys indicate the Forest has a $64 million deferred maintenance backlog. Major deferred maintenance work items include replacement of worn aggregate surface material, bituminous surface treatments, asphalt pavement overlays, replacement of worn and/or undersized culverts, and major repair or replacement of bridges. The deferred

maintenance backlog will continue to increase if current funding levels remain constant or decrease more.

The 74 road bridges on the Forest are degrading to the point that 6 to 10 structures will need to be closed to traffic if not replaced within the next five years. The Nez Perce NF typically replaces 1 bridge every three years. Access provided by Forest bridges will tend to decline.

Information from the Forest-scale Roads Analysis will be used to help prioritize work during annual maintenance operations planning directing funding to higher value/higher risk roads.

Decommissioning Guidelines

Road decommissioning involves removing unneeded roads from the National Forest Road System by stabilizing them and restoring them to a more natural state (36 CFR Part 212).

Road decommissioning costs can be estimated utilizing experienced prices. Road decommissioning can consist of a range of treatment from roadway abandonment to roadway obliteration. On the Nez Perce National Forest, road decommissioning costs have typically ranged from $7,000 to $10,000 per mile. Costs can be greater than these ranges in cases where specialized slope stabilization or stream remediation treatments are required.

Funding for decommissioning is generally a combination of Forest Service appropriated funds (road maintenance and watershed) and contributions from cooperating agencies and groups. The Nez Perce Tribe has been a significant partner in funding road decommissioning work on the Forest.

Road decommissioning accomplishments are limited by available appropriated funds even for cooperatively funded projects. The Forest Service's cost of planning, developing contracts and administration of decommissioning projects draws from the same limited funds used for road maintenance. Administrative overhead taps also raise the price for cooperator projects.

Decommissioning should be scheduled as part of integrated resource management projects on the Forest. Decommissioning treatments should address the resource issues identified in the project decision record.

Assessment of Building Roads in Inventoried Roadless or unroaded areas

Approximately 74% (376,419 acres) of the Inventoried Roadless Areas on the Forest are allocated in the current Forest Plan to management areas that allow road construction and reconstruction. Some of the suitable timber acreage outside of Inventoried Roadless Areas has been roaded and is under some form of vegetation management. There are still some areas outside of Inventoried Roadless Areas that need roads for vegetation (timber, fuels reduction, prescribed fire) management. Some local publics do not support construction of these roads.

Road construction in inventoried roadless areas will most likely result in opposition from some public groups or individuals and conflict. Some inventoried roadless areas are not conducive to road construction due to constraints such as, steep slopes, unstable soils, and wetlands. In other areas or different locations (ridgetops), roads could be constructed after adequate project planning road design and mitigation.

Roads That Could Be Added To the Forest Highway System

Forest Road 221, from Grangeville to the Allison Creek, is currently designated on each end as Idaho Forest Highway 59 North Section and South Section. The middle section of this route may be proposed for future designation to make a continuous route. It is currently a seasonal use road that is not kept open in the winter. Whether this would even be proposed would depend on the interest of the communities, State Transportation Agencies, Counties, timber companies, and other Forest users.

The development (reconstruction – upgrade of highway standards) of the State Highway system would also have an effect on the communities and the Forest. If the pattern or schedule of Forest resource management should significantly change from historical patterns the existing transportation network may be inadequate.

Travel Management

The roads categorized as lower value in Figure 2 are still important for access to locations on the Forest. Motorized recreation use on the Forest is increasing and roads are key facilities for visitor access.

Ecosystem Analysis at the Watershed Scale

As part of ecosystem analysis at the watershed scale (EAWS), a sub-forest roads analysis is conducted. The Forest has established a list of watershed analyses based on an interdisciplinary review of resource condition and risks. Risks posed by roads were part of the criteria that set up this analysis schedule. The results of the watershed analysis, which includes analysis of classified and unclassified roads, are used to assist with development of potential activities that will be analyzed during project NEPA analysis.

This could include decommissioning, seasonal closures, or potential low risk locations for additional roads. Table 7 shows the watershed analysis status for the Forest. Acres shown for each watershed may include non-National Forest System lands.

Table 7 - Watershed Analysis Status for the Nez Perce NF

Area Name	Acres	Status
Slate Creek EAWS	79,139	Completed
Newsome Creek EAWS	42,611	Completed
Clear Creek EAWS	65,081	Not Started
O'Hara-Goddard EAWS	47,149	Not Started
Red River EAWS	103,272	Draft
Allison Plus or EAWS	45,266	Not Started
Stillman-Falls EAWS	15,668	Not Started
Crooked River EAWS	45,620	Not Started
North Selway Face EAWS	71,958	Not Started
Crooked Creek EAWS	84,293	Not Started
American River EAWS	58, 593	Not Started
Newsome EAWS	42,611	Draft
Meadow Creek EAWS (SFC)	24,063	Draft

Aquatic Resources

There are opportunities to address road impacts to aquatic resources in a more specific manner when roads analysis is completed during watershed or project analysis. Issues such as water quality and fish habitat, and erosion may be addressed.

Opportunities to consider to address road impacts to surface and subsurface hydrology during sub-forest scale roads analysis are:

- Design roads to minimize interception, concentration, and diversion potential.
- Design measures to reintroduce intercepted water back into slow subsurface pathways.
- Use drainage structures to disconnect road ditches from stream channels rather than delivering water in road ditches directly to stream channels.

- Evaluate and reduce diversion potential at stream crossings.
- Reduce the number of road-stream crossings to minimize possible adverse affects
- Change the type of crossing to better fit the situation
- Design crossings to pass all potential products including sediment and woody debris

Potential opportunities to reduce erosion sources are:

- Increase the number and effectiveness of drainage structures
- Improve the road surface by gravelling or adding a binding material
- Stabilize cut and fill slopes

Possible means to address existing roads on areas with high mass wasting potential area:

- Relocate roads to an area with more stable soils and parent material
- Relocate drainage structures so that outlets are on less sensitive areas which may include flatter slopes and better-drained soils.

Opportunities to reduce the effects of the road system on wetlands and riparian areas include:

- Relocate roads out of wetland and riparian areas.
- When relocation is not an option, implement procedures to restore wetland or riparian hydrology.

Finally, opportunities to address road structures that restrict migration and movement of aquatic organisms include:

- Reset the culvert to eliminate the restricting feature.
- Replace the culvert with an alternative crossing such as a bridge, hardened low-water ford, or bottomless arch culvert.

Forest Plan Revision

One of the key areas to be addressed is access and recreation opportunities for motorized and non-motorized recreation outside of designated wilderness. There are conflicts between motorized and nonmotorized Forest users during the summer and fall periods. Winter motorized use may conflict with management of lynx. The demand for motorized trails is increasing in some areas on the Forest, particularly close to small rural communities. Areas where loop trails, possibly using existing roads and trails, need to be identified and evaluated.

Access needs for future management of vegetation and fuels in the roaded and inventoried roadless areas on the Forest need to be reviewed.

Deferred Maintenance Backlog

This road analysis clearly shows that annual maintenance funding is inadequate to maintain the current road system on the Forest. Many roads will continue to build up additional deferred maintenance costs and degrade unless increases in road management funding become available.

NEPA Analysis Needs

This Forest scale roads analysis is to be used to assist with revision of the Nez Perce National Forest Plan and to support sub-forest scale roads analysis as well as project decisions. Decisions from Forest Plan Revision and projects will be require appropriate NEPA analysis as determined by the deciding official. Forest scale and sub-forest scale roads analysis are assessments that are completed to assist with Forest Plan Revision and project scale decisions.

Key Findings of the Analysis by Issue

The key findings related to the issues identified for analysis are:

1. **Road maintenance funding appropriated by Congress is not adequate to maintain and sign roads to standard.**

   This road analysis clearly shows that annual maintenance funding is inadequate to maintain the current road system on the Forest. Many roads will continue to build up additional deferred maintenance costs and degrade unless increases in road management funding become available.

   The current road maintenance funding applies the majority of the funds on the major road system that only accounts for 27 % of system roads on the Forest. The remaining maintenance budget is allocated to high priority needs identified annually on a limited set of local roads.

   Opportunities to implement management strategies that reduce road maintenance need to be assessed during sub-forest and project roads analysis. Possible actions include but are not limited to: (1) manage with restricted access and (2) removal of high maintenance cost structures and manage as intermittent storage roads available for future management activities and public access.

   Condition surveys indicate the Forest has a $64 million deferred maintenance backlog. Major deferred maintenance work items include replacement of worn aggregate surface material, bituminous surface treatments, asphalt pavement overlays, replacement of worn and/or undersized culverts, and major repair or replacement of bridges. The deferred maintenance backlog will continue to increase if current funding levels remain constant or decrease more.

2. **Road access may not be adequate for future management needs.**

   Some arterial, collector and local roads are not being maintained to specified standards. In some areas the road system will continue to degrade and this will affect future access to areas served by these roads.

   The arterial and collector road system outside of inventoried roadless is nearly complete to adequately manage vegetation resources. Some areas will require additional local roads for vegetation and fire protection purposes. Depending on management allocations from the revision of the Forest Plan, future management strategies may require road access for management activities.

   Approximately 83 miles of road have been constructed in inventoried roadless areas, as authorized by the current Forest Plan, since 1987. This is not a

substantial change to the quantity or quality of recreation opportunities in inventoried roadless areas.

Decommissioning of roads has not caused a substantial change in the quantity or quality of roaded recreation opportunities. The majority of roads decommissioned since 1992 (approximately 251 miles) have been local system or unclassified non-system roads that threaten water quality and fish habitat.

Due to a lack of funds and resources, many roads haven't been maintained regularly. Decreasing maintenance due to funding shortfalls means the intended maintenance standard and desired road condition may not be achieved on many roads. Over time many of these roads have become unusable to passenger car traffic due to growth of trees and brush in the roadbed.

Approximately 74% (376,419 acres) of the Inventoried Roadless Areas on the Forest are allocated in the current Forest Plan to management areas that allow road construction and reconstruction. Much of the suitable timber outside of inventoried roadless areas has been roaded and is under some form of vegetation management. There are still some areas outside of inventoried roadless areas that need roads for vegetation (timber, fuels reduction, prescribed fire) management. Some local publics do not support construction of these roads.

3. **Management of the Forest road system can affect cultural and traditional uses (such as plant gathering, access to traditional & cultural sites) and American Indian treaty rights.**

The Nez Perce are historic users of the lands that comprise the Nez Perce National Forest. The Nez Perce National Forest is ceded territory of the Nez Perce Tribe, who retains strong traditional cultural ties to these lands. This tribe also retains rights to hunt, gather, and fish at usual and accustomed places on these ceded lands through the Treaty of 1855.

These tribes have There are a number of locations that are significant for traditional gathering, fishing, hunting, and religious purposes. Several locations on the Forest are held to be sacred.. Tribal members are active users of these traditional areas.

Maintaining access for traditional and cultural uses by American Indians is a very important function of the Forest road system. It is also important to evaluate the need to decommission some roads in order to protect watersheds, fish habitat and fish populations for future use by American Indians.

4. **Some roads are causing adverse impacts to Forest resources and should be prioritized for evaluation at the sub-forest level.**

   Sub-forest watershed analysis will include an analysis of classified and unclassified roads. Potential projects to address adverse impacts from existing roads will be identified. This could include decommissioning, seasonal closures, or potential low risk locations for additional roads. Decisions that change public access and existing road systems will include public involvement to ensure that local concerns are evaluated and considered prior to final decisions.

Administrative Record

The analysis file and records for this project are located at the Nez Perce National Forest Supervisor's Office in Grangeville, Idaho. Copies of the report can be requested by contacting the Nez Perce National Forest at 208-983-1950. It is also available on the Nez Perce National Forest website at **www.fs.fed.us/r1/nezperce**.

References

Burroughs, Edward R. Jr. and John G King, Reduction of Soil Erosion on Forest Roads, General Technical Report INT-264, July 1989.

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USDA Forest Service, Nez Perce National Forest, Road Systems Summary FY 2004, unpublished.

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USDA Forest Service, Nez Perce National Forest, Selway and Middle Fork Clearwater Rivers Subbasin Assessment, March, 2001.

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Appendix A

Risk and Value Criteria

Appendix A
Risk and Value Criteria

Values Ratings

Recreation Use Value

- High = High use levels; major through roads; and roads to points of interest.
- Moderate = Medium use levels; destination roads; numerous dispersed campsites.
- Low = Minor through road; no points of interest.

Access Value

- High = Primary access to private land or Forest Service administrative facility or primary access to large areas.
- Moderate = Alternate access to private land or Forest Service administrative facility or principal access to moderate size areas.
- Low = Does not provide access for private lands or Forest Service facilities; primarily local access.

Resource Management Value

- High = High need for access for timber management, fire management and other uses.
- Moderate = Medium need or use for timber management, fire management and other uses.
- Low = Lower need or use for timber management, fire management, and other uses.

Risk Ratings

Mass Wasting

- High = Greater than 67% of road segment exists on landtypes rated as “High” for mass wasting potential.
- Moderate = From 33 % to 67% of road segment exists on landtypes rated as “High” for mass wasting potential.
- Low = Less than 33% of road segment exists on landtypes rated as “High” for mass wasting potential.

Surface Erosion Rating

- High = Greater than 67% of road segment exists on landtypes rated as “High” for surface erosion potential.
- Moderate = From 33% to 67% of road segment exists on landtypes rated as “High” for surface erosion potential.
- Low = Less than 33% of road segment exists on landtypes rated as “High” for surface erosion potential.

Aquatic Risk Rating

Aquatic risk rating was derived through a combination of looking at stream proximity and habitat value for aquatic species.

- High = Road segment exists in close proximity to streams or in high quality aquatic habitat.
- Moderate = Road segment exists at moderate distance from streams or in moderate aquatic habitat.
- Low = Road segment is removed from streams or in lesser aquatic habitat.

Wildlife Risk Rating

Wildlife risk rating was derived based upon evaluation of conditions for big game as determined by the "North Idaho Elk Coordinating Guidelines"

- High = Road segment exists in areas where habitat conditions for elk are below objectives.
- Moderate = Road segment exists in areas where habitat conditions for elk are at or near objectives.
- Low = Road segment exists in areas where habitat conditions are above elk objectives.

Appendix B

Risk/Value Ratings by Road

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706030506	492	1.62	3	2	2	1	1	2	1	7	5	1
1706020710	1188	10	2	2	3	1	1	1	2	7	5	1
1706020710	1190	0.35	2	2	3	1	1	1	2	7	5	1
1706020707	1190	4.47	2	2	3	1	1	1	2	7	5	1
1706020905	2025	10.57	2	2	3	1	1	1	2	7	5	1
1706020903	263	14.42	2	2	3	3	1	1	1	7	6	1
1706030508	284	3.73	2	2	3	1	2	1	2	7	6	1
1706030507	284	4.7	2	2	3	1	1	2	2	7	6	1
1706030503	648	19.49	3	2	2	1	3	1	1	7	6	1
1706030401	653	6.41	2	2	3	1	2	1	2	7	6	1
1706020906	1103	0.73	2	2	3	1	1	2	2	7	6	1
1706030507	1103	5.83	2	2	3	1	2	1	2	7	6	1
1706030402	1129	1.16	2	2	3	1	1	2	2	7	6	1
1706030501	1172	9.47	2	2	3	1	1	3	1	7	6	1
1706030501	1188	0.05	2	2	3	1	1	2	2	7	6	1
1706030504	1803	13.66	2	2	3	1	1	3	1	7	6	1
1706021004	2110	0.91	3	3	1	1	1	3	1	7	6	1
1706020707	222	15.86	3	3	2	1	1	1	1	8	4	1
1706020902	2078	0.01	3	2	3	1	1	1	1	8	4	1
1706020708	222	1.76	3	3	2	1	2	1	1	8	5	1
1706030204	317	11.98	3	3	2	1	1	1	2	8	5	1
1706020902	441	0.98	3	2	3	1	1	1	2	8	5	1
1706020711	444	5	3	3	2	1	2	1	1	8	5	1
1706030505	471	1.58	3	2	3	1	1	2	1	8	5	1
1706030502	471	2.41	3	2	3	1	1	2	1	8	5	1
1706030504	492	0.11	3	2	3	1	1	2	1	8	5	1
1706030503	649	8.92	3	2	3	1	2	1	1	8	5	1
1706030507	9435	1.27	3	2	3	1	1	2	1	8	5	1

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706030504	233	5.82	3	3	2	1	1	3	1	8	6	1
1706020905	243	6.36	3	2	3	1	1	1	3	8	6	1
1706030503	244	6.68	3	2	3	1	2	1	2	8	6	1
1706030203	290	6.02	2	3	3	1	2	2	1	8	6	1
1706030503	307	2.86	2	3	3	1	2	1	2	8	6	1
1706020903	420	8.45	3	3	2	1	1	1	3	8	6	1
1706020707	421	16.24	3	3	2	1	2	1	2	8	6	1
1706030506	444	1.19	3	3	2	1	2	2	1	8	6	1
1706020706	468	3.83	3	2	3	1	1	2	2	8	6	1
1706030402	470	1.32	3	2	3	1	1	2	2	8	6	1
1706030507	484	3.67	2	3	3	1	2	1	2	8	6	1
1706030503	1105	11.11	3	2	3	1	3	1	1	8	6	1
1706020906	2009	1.33	2	3	3	1	1	3	1	8	6	1
1706030507	2009	3.86	2	3	3	1	3	1	1	8	6	1
1706020903	2078	4.24	3	2	3	2	2	1	1	8	6	1
1706020906	4600	3.93	3	2	3	1	1	2	2	8	6	1
1706020903	420	0.16	3	3	3	1	1	1	1	9	4	1
1706020905	420	4.32	3	3	3	1	1	1	1	9	4	1
1706021005	517	3.65	3	3	3	1	1	1	1	9	4	1
1706021004	517	8.27	3	3	3	1	1	1	1	9	4	1
1706020905	642	0.1	3	3	3	1	1	1	1	9	4	1
1706020903	2065	0.63	3	3	3	1	1	1	1	9	4	1
1706020903	241	11.06	3	3	3	1	1	1	2	9	5	1
1706020903	441	5.74	3	3	3	1	1	1	2	9	5	1
1706020904	444	4.26	3	3	3	1	1	2	1	9	5	1
1706020903	672	13.91	3	3	3	1	1	1	2	9	5	1
1706030503	1858	0.12	3	3	3	1	1	1	2	9	5	1
1706020902	2007	4.31	3	3	3	1	1	1	2	9	5	1

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706030202	223	0.66	3	3	3	1	1	3	1	9	6	1
1706030507	309	15.8	3	3	3	1	1	2	2	9	6	1
1706020708	394	1.26	3	3	3	1	3	1	1	9	6	1
1706020711	394	4.8	3	3	3	1	3	1	1	9	6	1
1706020902	394	8.37	3	3	3	1	3	1	1	9	6	1
1706030501	421	0.05	3	3	3	1	1	2	2	9	6	1
1706020904	441	8.55	3	3	3	1	1	2	2	9	6	1
1706020707	468	1.74	3	3	3	1	2	1	2	9	6	1
1706030203	468	4.29	3	3	3	1	1	2	2	9	6	1
1706030501	468	7.56	3	3	3	1	1	2	2	9	6	1
1706020706	468	17	3	3	3	1	1	2	2	9	6	1
1706020906	642	7.18	3	3	3	1	1	3	1	9	6	1
1706030507	648	7.71	3	3	3	1	1	2	2	9	6	1
		385.86										69
1706020906	479	6.29	2	2	3	1	1	3	2	7	7	2
1706030503	492	24.85	3	2	2	1	3	2	1	7	7	2
1706030507	1105	7.09	3	2	2	1	2	2	2	7	7	2
1706030204	1129	6.82	2	2	3	1	3	1	2	7	7	2
1706030501	1190	4.39	2	2	3	1	1	3	2	7	7	2
1706030501	1194	4.16	2	2	3	1	1	3	2	7	7	2
1706030507	2023	5.42	2	2	3	1	3	1	2	7	7	2
1706030203	443	9.79	3	2	2	2	3	2	1	7	8	2
1706030501	1189	8.12	2	2	3	1	3	2	2	7	8	2
1706030501	1803	5.27	2	2	3	1	3	3	1	7	8	2
1706020904	2070	4.26	2	2	3	1	3	3	1	7	8	2
1706030504	522	1.13	2	2	3	1	3	3	2	7	9	2
1706030501	522	4.68	2	2	3	1	3	3	2	7	9	2

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706030507	279	15.31	2	3	3	1	3	1	2	8	7	2
1706030202	319	2.38	3	3	2	2	2	1	2	8	7	2
1706030401	470	0.64	3	2	3	1	3	1	2	8	7	2
1706030204	470	8.45	3	2	3	1	3	1	2	8	7	2
1706030503	1808	4.42	2	3	3	1	3	1	2	8	7	2
1706020906	243	2.76	3	2	3	1	2	2	3	8	8	2
1706030507	244	14.59	3	2	3	1	2	2	3	8	8	2
1706030202	290	6.15	2	3	3	3	3	1	1	8	8	2
1706020904	354	12.34	3	2	3	1	2	3	2	8	8	2
1706030502	443	10.43	3	2	3	1	3	3	1	8	8	2
1706030402	464	1.53	3	2	3	1	3	2	2	8	8	2
1706030502	464	5.36	3	2	3	2	2	2	2	8	8	2
1706030503	469	3.98	3	2	3	3	1	3	1	8	8	2
1706020906	2000	6.51	3	2	3	1	2	3	2	8	8	2
1706020710	222	7.13	3	3	2	1	2	3	3	8	9	2
1706020904	243	0.35	3	2	3	1	3	2	3	8	9	2
1706030204	651	16.39	3	2	3	2	3	3	2	8	10	2
1706030507	1852	8.58	3	2	3	1	3	3	3	8	10	2
1706020902	221	14.41	3	3	3	1	2	1	3	9	7	2
1706030507	221	4.14	3	3	3	1	1	2	3	9	7	2
1706030204	223	12.2	3	3	3	2	1	3	1	9	7	2
1706030402	286	21.73	3	3	3	1	2	2	2	9	7	2
1706030507	444	3.14	3	3	3	1	3	2	1	9	7	2
1706030204	464	11.67	3	3	3	2	2	1	2	9	7	2
1706030505	464	11.54	3	3	3	1	2	2	2	9	7	2
1706020906	221	16.71	3	3	3	1	1	3	3	9	8	2
1706030507	1106	5.56	3	3	3	1	3	1	3	9	8	2
1706030508	1106	4.72	3	3	3	1	3	1	3	9	8	2

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706030502	1199	6.5	3	3	3	1	2	3	2	9	8	2
1706030505	1199	7.02	3	3	3	1	3	2	2	9	8	2
1706030507	1851	4.49	3	3	3	1	1	3	3	9	8	2
1706030402	1858	0.02	3	3	3	1	3	2	2	9	8	2
1706030506	309	6.92	3	3	3	1	3	3	2	9	9	2
1706030505	1858	15.29	3	3	3	1	3	3	2	9	9	2
1706020904	221	23.03	3	3	3	1	3	3	3	9	10	2
		388.66										96
1706020710	233	6.9	1	1	1	1	2	3	1	3	7	3
1706030505	307	4.14	1	1	1	1	2	2	2	3	7	3
1706030507	451	13.36	1	1	1	1	2	1	3	3	7	3
1706020902	536	3.69	1	1	1	2	1	1	3	3	7	3
1706020904	536	0.02	1	1	1	1	1	2	3	3	7	3
1706020906	1112	0.41	1	1	1	1	1	3	2	3	7	3
1706030501	1166	4.68	1	1	1	1	2	3	1	3	7	3
1706030402	1842	2.03	1	1	1	1	1	2	3	3	7	3
1706020906	1863	0.2	1	1	1	1	1	3	2	3	7	3
1706030503	1808A	0.37	1	1	1	1	3	1	2	3	7	3
1706030503	1808F	0.24	1	1	1	2	2	1	2	3	7	3
1706030501	222	0.07	1	1	1	1	3	3	1	3	8	3
1706020904	398	9.98	1	1	1	1	3	3	1	3	8	3
1706030507	1104	2.63	1	1	1	1	3	1	3	3	8	3
1706030204	1119	7.52	1	1	1	2	3	1	2	3	8	3
1706030507	1185	4.5	1	1	1	1	3	2	2	3	8	3
1706030503	2005	0.3	1	1	1	1	3	3	1	3	8	3
1706030507	2113	0.06	1	1	1	3	1	3	1	3	8	3
1706030501	222B1	0.1	1	1	1	1	3	3	1	3	8	3

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706030501	222B2	0.16	1	1	1	1	3	3	1	3	8	3
1706030501	222E	0.2	1	1	1	1	3	3	1	3	8	3
1706020710	222J	0.05	1	1	1	1	3	3	1	3	8	3
1706030202	223Q	0.05	1	1	1	1	3	3	1	3	8	3
1706030204	223Q	0.08	1	1	1	1	3	3	1	3	8	3
1706030202	223T	0.13	1	1	1	3	1	3	1	3	8	3
1706030204	464B	3.36	1	1	1	1	3	2	2	3	8	3
1706030502	646	6.49	1	1	1	1	3	3	2	3	9	3
1706030501	2006	0.18	1	1	1	1	3	3	2	3	9	3
1706030501	222B	0.27	1	1	1	1	3	3	2	3	9	3
1706030501	234A	0.2	1	1	1	1	3	3	2	3	9	3
1706030501	234D	0.12	1	1	1	1	3	3	2	3	9	3
1706030501	234M	0.16	1	1	1	1	3	3	2	3	9	3
1706030501	234M1	0.37	1	1	1	1	3	3	2	3	9	3
1706030501	234M2	0.12	1	1	1	1	3	3	2	3	9	3
1706020904	354B	0.13	1	1	1	1	3	3	2	3	9	3
1706021004	624	3.68	1	1	1	2	3	3	2	3	10	3
1706030204	223E	0.15	1	1	1	3	3	3	1	3	10	3
1706030203	290F	0.1	1	1	1	3	3	3	1	3	10	3
1706030204	1121	4.74	1	1	2	1	3	1	3	4	8	3
1706030502	1809	7.29	1	1	2	1	3	3	1	4	8	3
1706020904	2002	8.92	1	1	2	1	3	3	1	4	8	3
1706030505	1808	3.08	1	2	1	1	3	3	2	4	9	3
1706020905	463	8.96	1	2	2	1	1	1	3	5	6	3
1706030505	1831	5.44	2	1	2	1	2	3	1	5	7	3
1706030507	337	5.7	2	1	2	1	3	1	3	5	8	3
1706030402	650	11.56	2	1	2	1	3	3	1	5	8	3
1706030501	1150	10.6	2	1	2	1	3	3	1	5	8	3

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706020904	354G	0.43	2	2	1	1	3	3	2	5	9	3
1706020902	263	15.95	2	2	2	2	2	1	2	6	7	3
1706030505	284	7.29	2	2	2	1	2	2	2	6	7	3
1706030506	1875	0.59	1	2	3	1	3	2	1	6	7	3
1706030507	2022	5.39	2	2	2	1	3	1	2	6	7	3
1706020906	2026	4.45	1	2	3	1	3	3	1	6	8	3
1706030502	283	8.36	2	2	2	1	3	3	2	6	9	3
1706030501	1183	9.48	2	2	2	1	3	3	2	6	9	3
		195.43										165
1706020708	233	2.95	1	1	1	1	1	1	1	3	4	4
1706020905	235	0.08	1	1	1	1	1	1	1	3	4	4
1706021005	487	10.89	1	1	1	1	1	1	1	3	4	4
1706021005	1614	0.02	1	1	1	1	1	1	1	3	4	4
1706020903	2108	0.37	1	1	1	1	1	1	1	3	4	4
1706020903	9909	1.17	1	1	1	1	1	1	1	3	4	4
1706020902	1614C	0.21	1	1	1	1	1	1	1	3	4	4
1706020903	2108A	0.08	1	1	1	1	1	1	1	3	4	4
1706020903	2108B	0.03	1	1	1	1	1	1	1	3	4	4
1706020903	2108C	0.05	1	1	1	1	1	1	1	3	4	4
1706020903	2108D	0.06	1	1	1	1	1	1	1	3	4	4
1706030204	223A	0.12	1	1	1	1	1	1	1	3	4	4
1706030204	223D	0.33	1	1	1	1	1	1	1	3	4	4
1706030204	223G	0.07	1	1	1	1	1	1	1	3	4	4
1706030204	223N	0.38	1	1	1	1	1	1	1	3	4	4
1706030204	223W	0.17	1	1	1	1	1	1	1	3	4	4
1706030204	223Z	0.38	1	1	1	1	1	1	1	3	4	4
1706020707	222	1.42	1	1	1	1	2	1	1	3	5	4

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706020906	235	0.42	1	1	1	1	1	2	1	3	5	4
1706030503	9435	2.31	1	1	1	1	2	1	1	3	5	4
1706030502	2107A	0.04	1	1	1	1	1	2	1	3	5	4
1706030502	2107B	0.12	1	1	1	1	1	2	1	3	5	4
1706030502	2107C	0.13	1	1	1	1	1	2	1	3	5	4
1706030507	546	0.15	1	1	1	1	1	3	1	3	6	4
1706030507	1100	0.22	1	1	1	1	1	3	1	3	6	4
1706030507	1108	0.03	1	1	1	1	1	3	1	3	6	4
1706030507	1402	0.07	1	1	1	1	1	3	1	3	6	4
1706030503	1403	0.03	1	1	1	1	1	3	1	3	6	4
1706030503	1404	0.04	1	1	1	1	1	3	1	3	6	4
1706020708	1614	0.04	1	1	1	1	1	3	1	3	6	4
1706030502	2107	0.23	1	1	1	1	1	3	1	3	6	4
1706020708	1614D	0.15	1	1	1	1	1	3	1	3	6	4
1706020906	1863A	0.09	1	1	1	1	1	3	1	3	6	4
1706030204	223F	0.06	1	1	1	1	1	3	1	3	6	4
1706030204	223J	0.02	1	1	1	1	1	3	1	3	6	4
1706030204	223M	0.04	1	1	1	1	1	3	1	3	6	4
1706030204	223M1	0.02	1	1	1	1	1	3	1	3	6	4
1706030204	223N1	0.15	1	1	1	1	1	3	1	3	6	4
1706030507	244G	0.13	1	1	1	1	1	2	2	3	6	4
1706030507	309D	1.12	1	1	1	1	1	3	1	3	6	4
1706021004	517A	0.45	1	1	1	1	1	3	1	3	6	4
1706030507	546A	0.2	1	1	1	1	1	3	1	3	6	4
1706030204	651A	0.81	1	1	1	2	2	1	1	3	6	4
1706020710	311	11.6	2	2	2	1	1	1	1	6	4	4
1706030503	284	2.68	2	2	2	1	1	1	2	6	5	4
1706020906	398	0.06	1	2	3	1	1	2	1	6	5	4

ROAD MANAGEMENT CATEGORIES
(Risk / Value Ratings)

HUC5	Road #	Road Section Total Miles	Rec. Rating	Access Rating	Resource Mgmt. Rating	Mass Wasting Rating	Surface Erosion Rating	AQ Risk Rating	Wildlife Risk Rating	Total Value (X Coord)	Total Risk (Y Coord)	Category (1-4)
1706030503	1875	18.68	1	2	3	1	2	1	1	6	5	4
1706020905	2028	10.27	2	2	2	1	1	1	2	6	5	4
1706030402	284	0.49	2	2	2	1	1	2	2	6	6	4
1706030504	311	4.42	2	2	2	1	1	3	1	6	6	4
1706021005	624	6.14	2	2	2	1	2	1	2	6	6	4
		80.19										204

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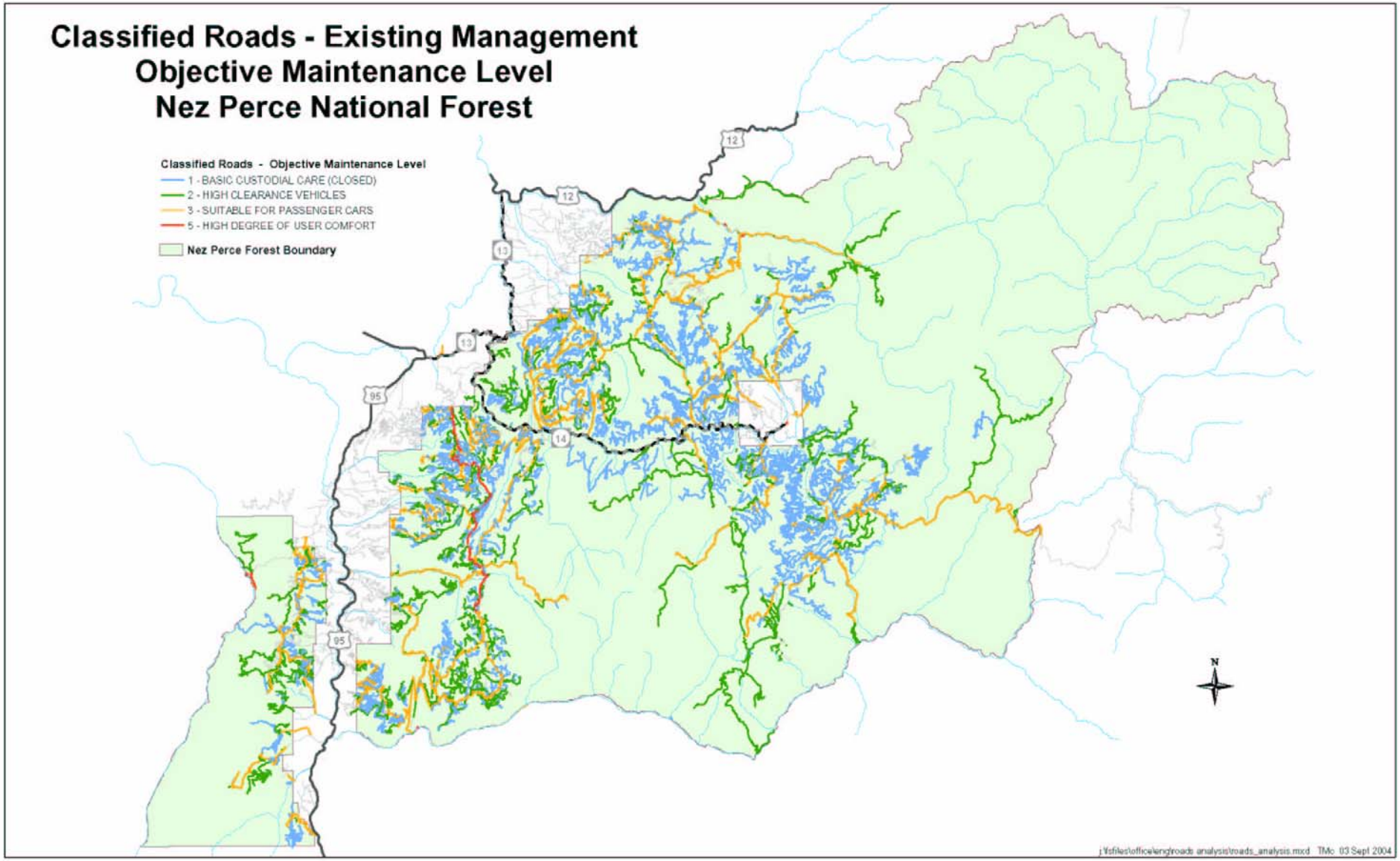
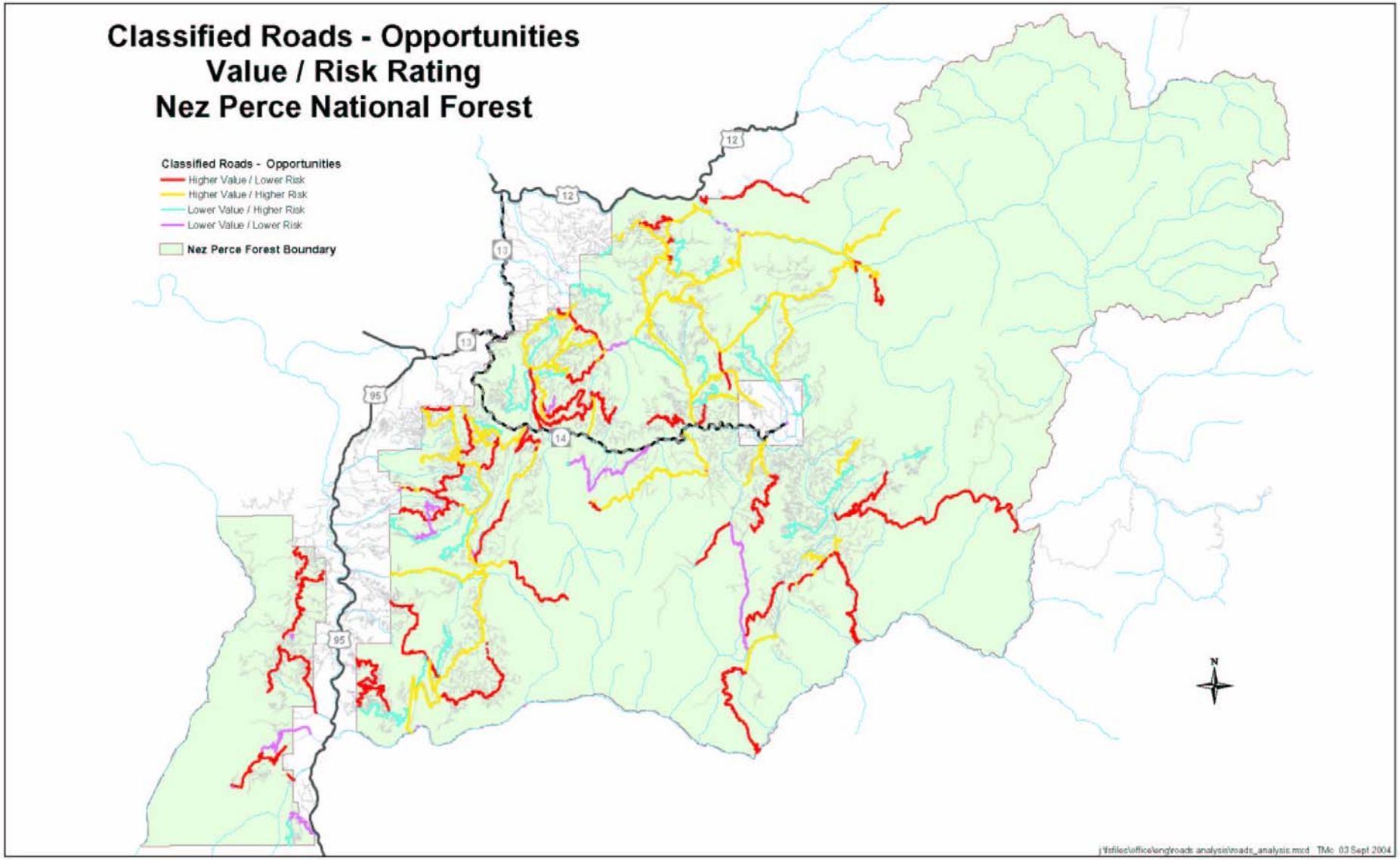
Appendix C

Maps

Classified Roads - Existing Management Objective Maintenance Level Nez Perce National Forest




Classified Roads - Opportunities
Value / Risk Rating
Nez Perce National Forest
Classified Roads - Opportunities
Higher Value / Lower Risk
Higher Value / Higher Risk
Lower Value / Higher Risk
Lower Value / Lower Risk
Nez Perce Forest Boundary
12
12
13
13
95
14
95
N
j:\fsfiles\office\eng\roads analysis\roads_analysis.mxd TMc 03 Sept 2004

Appendix D

Public Comments